EDUCATIONAL SCREEN

The Magazine Devoted Exclusively to the Visual Idea in Education

JANUARY, 1939

JAN 18 1939

VOLUME XVIII, NUMBER 1
WHOLE NUMBER 168

PERIODICAL ROOM GENERAL LIBRARY UNIV. OF MICH.

IN THIS ISSUE

A Desirable Four-Point Visual Program for Vocational Schools

Microscopic-Projection and Micro-photographic Slide Making

Instructional Sound Film Utilization

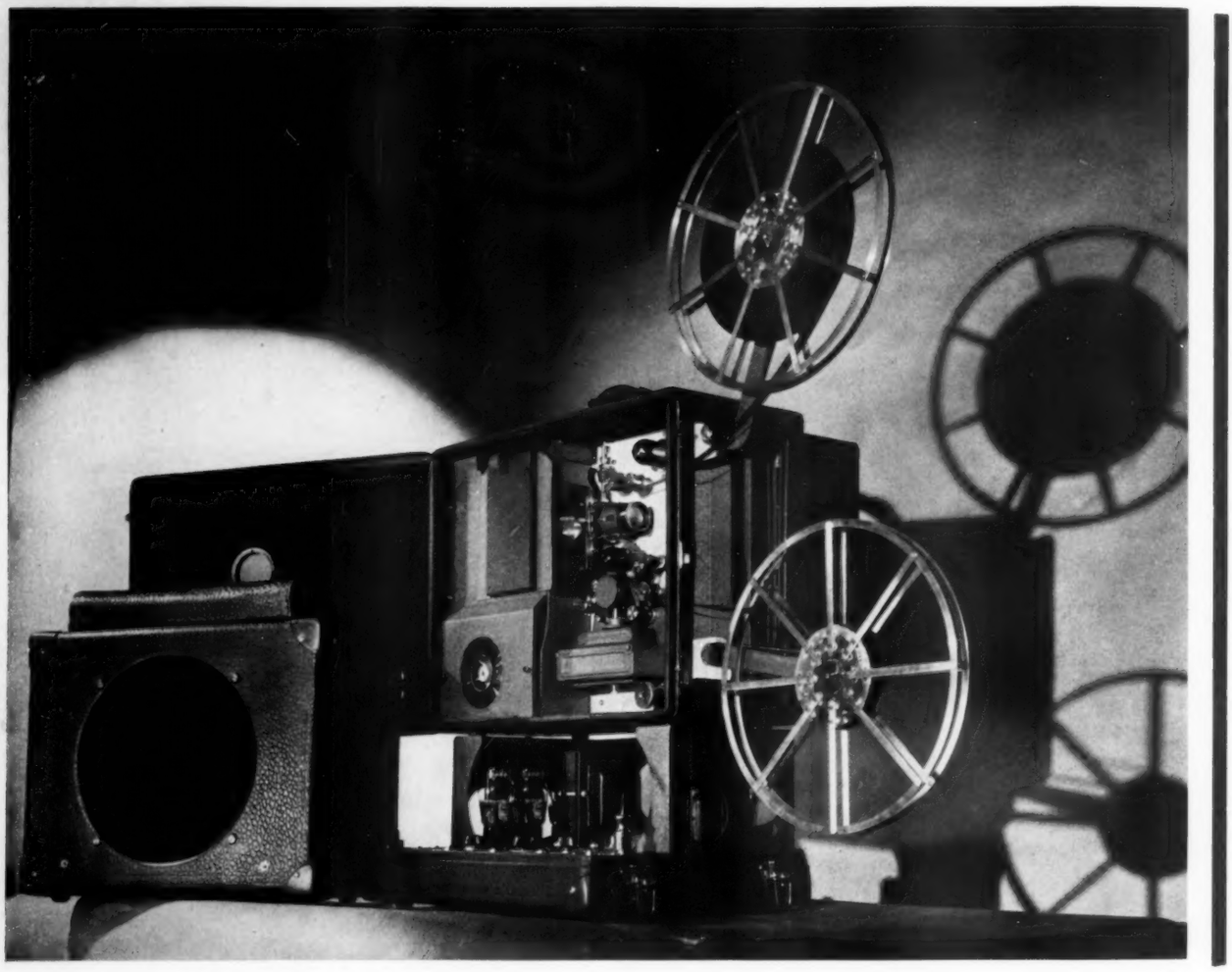
Motion Pictures — Not for Theatres

Photo by James H. Sedgwick (Courtesy of NATURE NOTES)

White-Breasted Nuthatch at Feeding Station

25c A COPY * $2.00 PER YEAR

DeVRY'S LATEST!



DeVry will not cut the price of sound projectors at the expense of quality—instead the **New DeVry 16 mm Sound Challenger,** shown above, advances quality all along the line.

You cannot find another shuttle movement 16 mm projector which permits you to **open the aperture while the machine is running** and draw the gates. Does away with dirt and fuzzy corners on the screen. The new **Film Glide** feature with . . . **Synchrophonic Threading** makes damage to film **impossible . . .** projector will run film with torn sprocket holes, etc., which otherwise would be considered unusable In the new "Challenger," the **DeVry Dual Sound Stabilizer** abolishes side sway and fluttering sound. A single demonstration will convince you of the new high level of performance reached by this new scientific achievement.

And the low price **will** surprise you. Send for free circulars on the new DeVry 16 mm Challenger Projector — also free copy of DeVry Movie News, and free booklet— "Values of Audio-Visual Aids in Education."

DeVRY CORPORATION

1103 Armitage Ave. **CHICAGO**

JUST SIGN THE COUPON

DeVry Corporation,
1103 Armitage Ave., Chicago

☐ Please send free circular on the new DeVry 16 mm Sound Challenger, also free copy of DeVry Movie News and booklet, "Values of Audio-Visual Aids in Education."

☐ Please arrange for free demonstration of DeVry 16 mm Sound Challenger.

Name.....

School.....

City..... State .....

The EDUCATIONAL SCREEN

JANUARY, 1939 VOLUME XVIII NUMBER ONE

Contents

A Desirable Four-Point Visual Program for Vocational Schools. F. J. Coyte 7

Microscopic Projection and Micro-photographic Slide Making. Merle Wimmer 8

Instructional Sound Film Utilization H. A. Gray 10

Motion Pictures—Not for Theatres. Arthur Edwin Krows 13

Among Ourselves—Notes from and by The Department of Visual Instruction. Conducted by The Editorial Committee 17

Editorial Page 19

News and Notes Conducted by Josephine Hoffman 20

Current Film Releases 24

In and For the Classroom Conducted by Wilber Emmert 26

Courtesy—Presented in Hand-Made Lantern Slides By Ann Gale 30

Film Estimates 34

Here They Are! A Trade Directory of the Visual Field 36

The EDUCATIONAL SCREEN published monthly except July and August by The Educational Screen, Inc. Publication Office, Pontiac, Illinois; Executive Office, 64 East Lake St., Chicago, Illinois. Entered at the Post Office at Pontiac, Illinois, as Second Class Matter. Copyright, January, 1939, by The Educational Screen. Address communications to Executive Office, 64 East Lake St., Chicago, Ill.
$2.00 a Year (Canada, $2.25; foreign, $3.00) Single Copies 25 cts.

THE EDUCATIONAL SCREEN, Inc.

Directorate and Staff

Nelson L. Greene, Editor
Evelyn J. Baker
Wilber Emmert
Ann Gale
Josephine Hoffman
F. Dean McClusky
Stanley B. Greene
Stella Evelyn Myers

Publications on the Visual Teaching Field

EDUCATIONAL SCREEN

The only magazine in the field of visual and audio visual instruction. Official organ of the Department of Visual Instruction of the National Education Association. Discusses methods, procedures and results with various types of visual teaching aids to instruction, and provides up-to-date information on progress and developments generally. A clearing-house of thought, fact and experience on all phases of the field. Published monthly except during July and August.

Subscription: **$2.00** one year; **$3.00** two years.

VISUALIZING THE CURRICULUM.

By C. F. Hoban, C. F. Hoban, Jr., and S. B. Zisman.

Presents in theory and in practice the basic methodology of visual instruction in relation to classroom procedure. Throughout the text the theory of visual aids is applied to textbook illustration. "Visualizing the Curriculum", itself a splendidly "visualized text", provides an abundance of technical guidance in the form of illustrative drawings of photographs, reports of school journeys, suggestions for mounting materials, for making slides, film strips, etc. It incorporates up-to-date material, provides a fine balance in the treatment of various teaching aids, evaluates various types of aids, and defines the functions and values of each in the learning process.

320 pp. illus. Price **$3.50.**(20% discount to schools)

THE AUDIO-VISUAL HANDBOOK.

By Ellsworth C. Dent.

Presents in convenient form, practical information for those interested in applying visual and audio-visual aids to instruction. The six chapters include discussions on "The Status of Visual Instruction," "Types of Visual Aids and Their Use," "Types of Audio-Visual Aids to Instruction," "Types of Sound Aids for Schools," "Organizing the Audio-Visual Service," "Source List of Materials and Equipment."

180 pp. Illus. Paper binding, **$1.25**; Cloth, **$1.75.**

PICTURE VALUES IN EDUCATION.

By Joseph J. Weber, Ph. D.

An important contribution to the literature of the visual field. Presents in unusually interesting form the results of extended investigations on the teaching values of the lantern slide and stereograph.

156 pp. Illus. Price **$1.00** (**67c** to E. S. subscribers)

COMPARATIVE EFFECTIVENESS OF SOME VISUAL AIDS IN SEVENTH GRADE INSTRUCTION.

By Joseph J. Weber, Ph. D.

The first published work of authoritative research in the visual field, foundational to all research work following it. Not only valuable to research workers, but an essential reference work for all libraries.

131 pp. Price **$1.00** (**67c** to subscribers of E. S.)

"1000 AND ONE" FILM DIRECTORY

"1000 and One"—the Blue Book of Non-Theatrical Films, published annually, is famous in the field of visual instruction as the standard film reference source indispensable to film users in the educational field. The current (14TH) edition, recently published, lists some 4500 films, carefully classified into 147 different subject groups (Including large group of entertainment subjects). Shows whether 16 mm or 35 mm, silent or sound, title, number of reels, summary of contents, sources distributing the films, and range of prices charged.

104 pp. Price **75c** (**25c** to subscribers of E. S.)

THE EDUCATIONAL TALKING PICTURE.

By Frederick L. Devereux.

Presenting preliminary solutions of some of the more important problems encountered in adapting the talking picture to the service of education. The first six chapters deal with the development of fundamental bases of production, with the experimentation which has been conducted, and with suggested problems for future research. The remaining chapters are devoted to the practical problems involved in utilizing the film effectively in educational programs.

220 pp. Illus. Price **$2.00.**(20% discount to schools)

HOW TO USE THE EDUCATIONAL SOUND FILM.

By M. R. Brunstetter, Ph. D.

Discusses the utilization of the educational sound film, and lists and illustrates techniques for placing the film into effective service in the classroom. The procedures suggested are based upon extended experience in studying teachers' use of sound films and in helping to organize programs of audio visual instruction in school systems. Two valuable Appendices and a full index round out the volume.

175 pp. Illus. Price **$2.00.** (20% discount to schools)

MOTION PICTURES IN EDUCATION IN THE UNITED STATES. By Cline M. Koon.

A report on the instructional use and indirect educational influence of motion pictures in this country, divided into nine units covering (1) the educational influence of motion pictures; (2) the motion picture in the service of health and social hygiene; (3) the motion picture in governmental service and patriotism; (4) the use of motion pictures in vocational education; (5) the motion picture in international understanding; (6) motion picture legislation; (7) the technique of making and exhibiting motion pictures; (8) the systematic introduction of motion pictures in teaching; and (9) educational problems of a general nature resulting from the introduction of motion pictures in teaching.

106 pp. Price **$1.00.** (20% discount to schools)

TO ORDER, Check Material Desired and Fill in Blank Below

Educational Screen subscribers check right column, others left column

	Price	To subscribers of E. S.
"1000 and One" Film Directory	$ .75 ☐	$ .25 ☐
Visualizing the Curriculum	3.50 ☐	3.50 ☐
(To Schools)	2.80 ☐	2.80 ☐
The Audio-Visual Handbook		
Paper Binding	1.25 ☐	1.25 ☐
Cloth Binding	1.75 ☐	1.75 ☐
Picture Values in Education	1.00 ☐	.67 ☐
Comparative Effectiveness of Some Visual Aids	1.00 ☐	.67 ☐
The Educational Talking Picture	2.00 ☐	2.00 ☐
(To Schools)	1.60 ☐	1.60 ☐
How to Use Educational Sound Film	2.00 ☐	2.00 ☐
(To Schools)	1.60 ☐	1.60 ☐
Motion Pictures in Education in The United States	1.00 ☐	1.00 ☐
(To Schools)	.80 ☐	.80 ☐

Subscription to THE EDUCATIONAL SCREEN

U. S. 1 year, $2.00 ☐ 2 years, $3.00 ☐
Foreign 1 year, $3.00 ☐ 2 years, $5.00 ☐
Canada 1 year, $2.25 ☐ 2 years, $3.50 ☐

Educational Screen
64 E. Lake St., Chicago

I have indicated items desired and enclose check for $.....

Name.....

School or Street.....

City..... State.....

A Desirable Four-Point Visual Program For Vocational Schools

Suggestive evidence that films can be used to advantage over a wider range of school activities.

By F. J. COYTE
Director of Activities, Connelley Vocational High School, Pittsburgh, Pa.

TO what extent does your visual program serve the needs of your school? True, the educational objective and viewpoint are paramount, but there may be additional school activities that automatically become a part of a well-developed visual program.

We at Connelley Vocational High School feel that our present program serves our school in four distinct ways: curricular, extra curricular, student activities, and administrative. For the reader to readily understand these divisions, one must first be familiar with the nature and type of school to which this program is most applicable. Connelley High School is a modern, well-equipped boy's Vocational High School, located near the downtown district of Pittsburgh, equipped with thirty shops offering instruction in seventeen different trades. The shops are housed in a saw-tooth roofed section of the school plant which joins the five-story Academic building. The school operates on a week-about plan with an enrollment of 1700 students equally divided between shops and academic. The cafeteria or auditorium accommodates one-half of the students at one time, necessitating two lunch periods. The weekly assembly and daily noon movies also require two sessions. The auditorium seats 850; the cafeteria 750, and the gymnasium and swimming pool are adequate in size.

Silent educational films and slides are shown in classrooms and lecture rooms, and sound pictures, in two widths, in the auditorium. Three individual visual requisitions are made up each semester to cover all visual needs; namely, silent classroom films and slides; secondly, auditorium sound pictures covering all available educational film in two widths, including educational feature pictures and serials, and thirdly; activities feature pictures—strictly entertaining—rented by the school from local exchanges. All regular films are supplied by the Visualization Department, borrowed or rented from other sources, through this department. All films are received at the school Supply Office, although many rental films from local film exchanges are picked up by the Activities Director as scheduled. Shipment of out-of-town rentals or loans are dispatched by Railway Express, prepaid, and charged to the Board of Education.

Present available visual equipment is as follows:

Classroom use—three 16mm silent projectors, two 500 watt, one 750 watt, two delineascopes, 500 watt, one 35mm Acme Projector, 500 watt, six Baloptican 500 watt Lanterns;

Auditorium use—35mm Simplex sound projector with carbon arc, and a 16mm Bell & Howell sound projector, 1000 watt.

A general outline and use of visual material is here given, with explanations following.

Frequency	Occasion	Type of Pictures	Place of Showing
1. Weekly (Curricular)	Academic, related and shops	Technical Informative Skills Scientific	Classrooms Lecture Rooms Shop Lecture Rooms Auditoriums —special
2. Monthly (Extra-Curricular)	2 Assembly periods	Feature and educational	Auditorium 2 Assemblies
3. Monthly (School Activities funds)	2 Assembly periods	Feature (entertaining)	Auditorium 2 Assemblies
4. Daily (Administrative)	2 Noon movies	Serials Educational News Reels	Auditorium 2 Assemblies

Curricular Use

The films and slides used by the related and academic teachers in the classrooms or lecture rooms, are chosen by the teachers. Each semester, the related teachers list all desirable educational films that can be scheduled to fit in with their class work. These lists are then checked and combined into one complete requisition, to avoid duplications, and then typed on regular forms and sent to the Visualization Department, two months in advance of the new semester. Films are chosen from the Pittsburgh School Visualization Catalogue, and other catalogues that require special booking and handling.

The Student Movie Crew at Connelley High School

(*Continued on page 22*)

Microscopic-projection and Micro-photographic Slide Making

Showing that limited resources for micro-projection apparatus need not prevent valuable results from minimum equipment.

By MERLE WIMMER
Center Grove High School, Bargersville, Indiana

MICROSCOPIC projection is one of the most efficient tools for teaching subjects which are adapted to the use of the microscope. The materials for its use are unlimited. Whether or not the teacher can be sure that the child is getting the desired view as he looks through the microscope has long been a problem. This ceases to be a problem when microscopic projection is employed. Views of almost any microscope slide may be flashed on the screen before the entire class. Magnification may be increased many thousand times.

Procedure

In event the school system does not own a regular micro-projector, the teacher can easily devise one by combining an ordinary microscope with a stereopticon. With the underside of the stage of the microscope placed directly against the focusing lens of the lantern, the machine is ready for use. (The microscope must be bent backward to a ninety degree angle.)

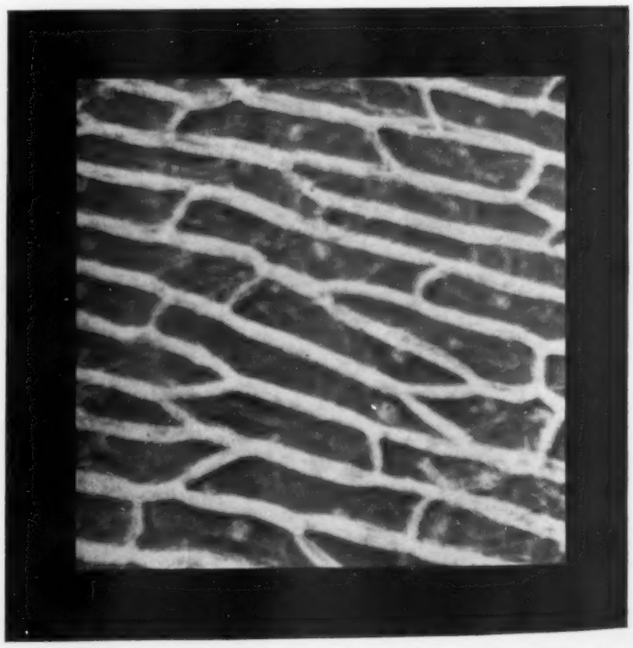
Very dark rooms give best results. Usually a basement room is more easily darkened. With the room darkened and the machine ready for use, place any temporary or permanent microscope slide on the stage of the microscope. Turn the lantern on and the image can be seen on the screen, which has been placed a few feet in front of the microscope.

Both living and dead structures may be used with equal success. Two examples of living structure which, I think, bring invaluable results are protozoa from hay infusia, and circulation of blood in the tail of a tadpole.

While projecting protozoa on the screen it is easy to bring out the value of antiseptics, disinfectants, and other materials in inhibiting growth and killing micro-organisms. Merely dip a small glass rod into any of the solutions, gently touch the drop of water containing the protozoa, and watch the results. In many cases the protozoa can actually be seen to explode.

Circulation of blood has a new meaning to a child when he has seen it on the screen. To demonstrate this I have found that I get the best results by using the tadpole. Other animals, such as small fish, adult frogs etc., may be used. If a tadpole is used, it should first be wrapped in a wet cloth, leaving only a small portion of the tail exposed. Place the exposed part of the tail on the stage of the microscope and focus properly by watching the screen while working the adjustments. Now you can see the network of capillaries with the blood surging through. The myriads of red corpuscles are easily seen. A drop of water can be applied to the tail every few seconds, by use of a medicine dropper. This will prevent the tail from drying and burning. After the regular circulation has been observed, a hemorrhage may be produced by pressing a sharp instrument against the tail of the tadpole while it is still on the microscope. This observation brings many valuable questions from the child and gives him information which he will never forget. Capillaries are now real things rather than something imaginary.

Prepared slides are very valuable when used in this type of work, but they are usually not as interesting to the children as actual living structures which show motion. Examples of materials espe-



Onion tissue, showing the nucleus in each cell. The picture was taken directly from the microscope without a camera, as explained in the article.

cially adapted for projection are: slides showing tissues, parts of insects, algae plants, small insects, protozoa, flower parts, vinegar eels, etc.

Making Photographic Lantern Slides

The value of making these slides lies in the possibility of keeping a permanent record of what has been observed. They can conveniently be used to recall the observations without the trouble of setting up the micro-projection machinery over again.

The cost of production of these slides amounts to a little more than the cost of the sensitive plates which may be purchased for a few cents each. The major cost is eliminated by the fact that no camera is needed.

These slides may either be made while the classroom projection work is in progress or at some other convenient time. A board can be prepared, to stand in front of the microscope, with special arrangements for supporting a sensitive plate where the projected image will strike it as desired. The magnification may be controlled by moving the board toward or away from the microscope. While getting the proper focus a piece of white paper should be placed on the board where the sensitive plate is later to be placed. When everything is in readiness, the room should be darkened. Place the sensitive plate on the board and turn the lantern on. Since the light is so strong, the exposure will be very short. The count should ordinarily not be more than one or two. The slide is now ready to develop as an ordinary photograph is developed. This slide is a negative except when stained slides are used. If you wish to make a positive you can accomplish this by allowing the negative to dry and put it back in place with an unexposed slide behind it. Take the microscope slide off and turn the light on again. The exposure should be slightly longer than in making the negative.

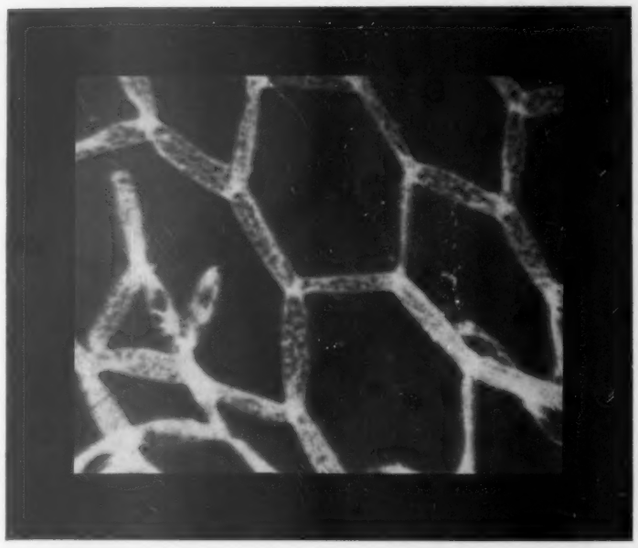
Less expensive records of these projected images can be made by using sensitive photograph paper. However, these are not as valuable as slides.

Student Activity Involved

Much interest can be added to this work by providing for pupil participation. The pupil may begin his contribution by securing and preparing materials for observation.

The entire class can make photographs for their notebooks while the projection machinery is set up. This can be accomplished in the same way as permanent slides are made. A simpler way to produce these pictures would be to make contact prints from the negative slides that have already been made. Negatives may also be made from commercial slides, by the contact method, and can be used by the pupil at any time to produce a photograph for his notebook.

Only a little effort is required to train one or more helpers to set up and operate the projection machinery. This leaves the teacher free to point out



Hydrodictyon, a genus of green spored algae, remarkable for beauty and peculiarity of structure. (A microscopic lantern slide made directly from the microscope).

structures on the screen and lead discussions about them. Before I adopted the practice of a pupil helper I often missed excellent opportunities to point out interesting and valuable things which were happening on the screen.

When protozoa are being shown on the screen the teacher should be free to point out the parts and explain their function. We have often observed certain kinds of protozoa ingesting and digesting food. At this time, it is necessary to have the undivided attention of the class if they are to see the contracting vacuoles and cilia in operation. No quantity of still pictures could be as profitable as this.

Advantages of Projection Work

(1) It eliminates the need for more than one microscope.

(2) It eliminates the possibility of faulty focusing on the part of the pupil.

(3) The attention of the entire class can be focused on one image at the same time.

(4) Much of the pupil's and teacher's time is saved.

(5) The pupil realizes that he is observing something real rather than a picture.

(6) Class discussion can go on while observation is being made.

(7) There is no limit to the observations that can be made by many pupils at one time.

(8) One prepared microscope slide will do the work of twenty, and will, at the same time, do it more effectively.

I have developed and used this method of teaching microscopic studies over a period of ten years. I find that it is very interesting to children and has outstanding value as a teaching aid. Each time the machine is set up I learn something new, as to materials and procedure.

Instructional Sound Film Utilization

A trenchant discussion of the particular advantages to be sought from sound film, and of school activities benefitting most by their use.

By H. A. GRAY, Ph.D.
Director of Field Studies,
Erpi Classroom Films Incorporated

IN REFERRING to the instructional sound film, differentiation is made between sound motion pictures having general educational values and those prepared specifically for use in the classroom. The instructional sound film is here defined as a type of audio-cinematography treating a specific body of subject matter making up course of study or curriculum content. As such, the techniques of its assembly, the methods of its distribution, and the objectives of its use differ from those of the entertainment, industrial, or novelty types of films now available to schools. Obviously, all motion pictures have educational values, if education is thought of in terms of the Deweyan philosophy that education is life experience. Such a broad conception of an educational motion picture, however, is confusing since it does not distinguish between the pedagogical film and other cinema products. To many laymen, and even to some educators, the term "educational film" is synonymous with the trade name of a theatrical product, or with any motion picture which does not follow the Hollywood run-of-mill procedure. Therefore, it seems desirable to emphasize that, while all films may be educational to some quantitative or qualitative degree, not all films educate or teach curriculum concepts directly or capitalize on the many advantages of the motion picture medium for the presentation of concepts difficult to communicate by other media of thought transmission.

In considering how the instructional sound film can be used most advantageously, the problem may be thought of from two viewpoints: (1) How can the film vitalize curriculum concepts previously studied, those being developed, or those about to be initiated in the regular instruction program; and (2) how can the medium be used to best advantage on a purely experimental basis, conditions permitting individual teachers to engage in such activities and to extend the knowledge of learning phenomena.

Relative to the first viewpoint, the instructional sound film has been found to have definite value for the purpose of summarizing a unit of instruction; it obviously has a contribution to render as a direct teaching aid by making available classroom learning experiences of a realistic nature difficult or impossible to provide by other means; it also serves as an interest motivating device for introducing a new unit of instruction and as a means of enriching a unit of study by opening up related areas for the student's investigation. Other uses to which it may be put are: (a) Extra-curricular activities including club work and other special projects, (b) Professional activities such as demonstration lessons and Parent-Teacher programs to acquaint the community with the effective use of modern teaching aids. These possibilities offer innumerable opportunities for the teacher to adapt a particular film to local needs and to do creative work with the medium.

To realize the values inherent in a sound film, prepared for instructional purposes, the teacher should plan in detail for its use. Attention should be given to adapting the content of the film to the current interests, needs, and abilities of the class; how the idea of the film showing can be built up to put the pupils in a receptive frame of mind for its initial viewing; how additional showings may be arranged to answer questions which have arisen from study activities initiated as a result of the first showing; in general, how the film can motivate learning throughout the study of a unit's work. To do these things adequately requires careful study of the content of the unit of instruction and the relation of the film to that subject matter. The latter can be done only by carefully studying the film prior to its viewing by the class, either by previewing the picture or by studying a scene by scene description of its continuity. Teachers wishing to familiarize themselves with studies which have been made of instructional sound film utilization, will find Brunstetter's book[1] of value.

Regarding opportunities to use the classroom film for experimental purposes, the teacher will be able to isolate problems for study in every instructional sound film. There are four components which should be given attention. All of these will afford material for experimental treatment and analysis.

The first component to be mentioned includes all visual elements inherent in a film, including animate and inanimate objects and their relationships in individual scenes, sequences of scenes and throughout the entirety of the film. Associated with these are effect factors such as attention-focusing devices, continuity, montage and transition devices known as, fades, dissolves, wipes, spins, and other optical effects employed to punctuate the film language in a manner similar to the way in which a written composition is treated to relate thought units and to provide for continuity flow and clarity of expression. These visual elements provide graphic learning cues and constitute the visual learning experience which the pupil undergoes.

In order for such experience to be meaningful so that effective learning can occur, the need for an apperceptive basis or learning readiness appears in terms of the objectives of the unit of instruction and the

[1] Brunstetter, M. R. *How to Use the Educational Sound Film.* Chicago: University of Chicago Press, 1937.

relation of the picture to those objectives. By developing techniques of manipulating the film's use so as to study the contribution which visual components make to learning achievement as defined in the unit's objectives, the teacher will find an abundance of experimental opportunities. However, it does not seem feasible to study such learning cues in isolation. Rather, they should be analyzed in conjunction with the other components of the instructional sound film, since the pupil is reacting to all components, not only with his organs of sight, but through other parts of his nervous, muscular and glandular systems as well.

A second component which should be given consideration as a learning cue may be described as environmental and interpretative sounds. These consist of all aural elements inherent in a natural situation recorded by the sound film to provide a realistic presentation of that situation. In other words, the learning experience is enriched or vitalized by the cues which natural sounds, associated with the visual components, provide. Related to these, of course, are auxiliary sounds which are employed to emphasize aspects of the visual-auditory presentation by way of stimulating a mode of reaction or of focusing attention on particular features of the situation. For example, selected music, exaggerated or invented sounds, immediately preceding, during, or following a particular scene, may be used to command attention or to promote other desirable psychological reactions. Such stimuli, together with environmental sounds, obviously are experimental variables for possible investigation. But probably a more important sound element than those just referred to is the carefully prepared verbal interpretation of the scenes unfolding before the observer. This makes the presentation as complete as modern communication devices can do at the present time. Proper verbal interpretation synchronized with the action of the picture guards against salient pictorial features escaping from the observer's attention and makes possible the elimination of distracting elements within the scene. In spite of the criticism currently directed against verbalism, words are learning cues and should not be cast into discard. The paramount need is for the judicious use of words such as is made in the carefully prepared instructional sound film. Everyday examples of the unreliability of testimony relative to what existed or occurred in a purely visual experience, or even in experiences where both visual elements and sounds were present, point to the need for pictorial interpretation. Then, too, inflections or other patterns of voice quality may be planned to command attention, hold interest, emphasize important details, or help stimulate mood receptivity or learning readiness in general.

The visual-aural factors discussed by the foregoing go to make up a third component of the instructional sound film, namely that of audio-visual concepts. These may be described as thought units or ideas formulated by elements of sight and sound and identified by both the narration interpreting the scene and by the visual elements constituting it. Such concepts may be thought of as "line" parts of the film in that they are comparable in a sense to the unit parts added to an automobile chassis as it moves along the factory assembly line. The film may be compared to the chassis as a carrier of parts which grow into a gradually completed whole as it passes along. The audio-visual concepts are the unit parts out of which the observer formulates generalizations as the film is shown.

Such generalizations and their concomitant attitudes constitute the fourth instructional sound film component to be described. Generalizations determine attitudes which, in turn, characterize the type of mental adjustment the individual makes to the immediate learning experience, and to subsequent situations having similar elements, other conditioning not intervening. Certainly then, concepts and generalizations depicted and fostered by the instructional sound film elements should be of major interest and concern in utilizing the medium.

For the purpose of exemplifying the foregoing ideas, the instructional sound film, *Water Power,* will be analyzed into its component elements and suggestions offered for their use in facilitating learning. The items listed in each column of the following table may be thought of as learning cues since they are the stimuli which act on the learner's receiving mechanisms, modifying them by effecting electrical and chemical changes in the neuro-muscular-glandular systems. Where such modifications occur in a normal manner, the growth of ideas begins; the learner is made conscious of the existence of objects and relationships; he associates these with previous learnings and his knowledge grows with the acquisition of additional concepts upon which he can build generalizations as the sound film elements continue to act upon him.

The film, *Water Power,* was prepared primarily for use at the intermediate grade level as part of a series on human geography. However, its value is not restricted to this level or subject, since, obviously, the subject matter treated also will be found in general science courses of the junior high school, the study of physiography at both the junior and senior high school levels, and where the relation of governmental agencies to the development of natural resources is considered in the social science courses of the senior high school grades the film also can be used advantageously. Depending upon what level and for what purpose the initial showing of the film is made, teaching procedure will vary somewhat, but for the first, second or third showing, for any purpose, at any level, the teacher should see that the group is properly prepared to view the film with definite objectives in mind. These should have to do with any or several of the four sound film components previously described and should be emphasized immediately before the film is shown.

Following the first showing, the teacher may well devote some time to questioning the pupils about the concepts and generalizations depicted by the film, noting deficiencies which can be remedied by discussions, reading, subsequent showings of the film, or study projects planned in accordance with the objectives of the unit and the film showing. Accompanying each film should be a study guide containing information pertaining to the objectives and subject matter of the unit, suggested study projects of enough variety to meet different regional conditions, and bibliographical references for both teacher and pupil. Consideration is

Learning Cues in The Instructional Sound Film, "Water Power"

Visual Elements	Interpretative Sounds	Audio-Visual Concepts	Generalizations and Attitudes Fostered
Clouds	Thunder	Rain comes from clouds	The water cycle plays an important part in man's life
Falling rain	Wind	Water runs from high to low ground	
Rivulet			
Creek	Running water (Symphony Orchestra for background music at appropriate intervals throughout).	Small streams make large rivers	
Stream			
Sea		Rivers flow to the sea	The natural elements can aid as well as obstruct civilization's progress
Sun		The sun causes water to evaporate and form clouds	
Potomac Falls	Falling water	Running water is a perpetual source of power	
Natives poling dugout			The development and wise use of natural resources is in keeping with the machine age
Niagara Falls		Waterfalls and rapids have retarded man's progress	
Niagara Rapids			
Early grist mill		Centuries passed before man learned to harness falling water for power	
Old water wheel	Water wheel turning		
Grinding grain	Grist mill turning		Labor saving devices are being invented with greater frequency than ever before and effect national economy
Animated Maps of North America		American colonists built dams for water power and used water wheels	
Modern factory exterior		Coal supplanted water as a source of power as industry developed	Conservation of our fuel resources is desirable in view of a diminishing supply
Boiler room	Stoking fire box		
Coal train	Coal sliding in chute		
Animated Maps of N. E. United States		Industrial centers were established near American coal fields	Natural resources and industries are closely linked geographically
Canadian Falls			
Niagara Power Plant		Our coal is being used up rapidly	
Animation of water turbine operating	Water turbines turning	Water power may be changed into electrical power by means of turbines	The transformation of energy from one form to another is a major scientific project of great social and economic significance
Electrical generators at Niagara	Electrical generators		
High voltage transmission wires		Electrical power can be distributed over large areas by wires	
Machine shop interior	Automatic machine tools	Electrical power has reduced hand labor in home and factory	
Electrical transformer			
Family living room		The federal government is building many dams to increase the nation's electrical power	The problem of government vs. private development of power resources requires extended study
Clothes washing machine	Electric washing machine		
Woman washing clothes by hand	Clothes rubbing washboard		
Boy churning butter by hand			
Electric churn in operation	Electric churn turning		
Man lighting lantern		Dams store water for irrigation and drinking purposes	
Boulder Dam			
Animated Maps of South America		Water power projects are not developed in South America as well as in the United States, due to the unsettled nature of the country and the simple wants of the people	The needs, geographical location and customs of people determine to some extent the rate of their technological progress
South American Falls			
Animated Maps of Europe			
Dnieperstroi Dam		Europe has developed water power more than has the United States	
Animated Map of Africa			
Victoria Falls		Africa has more water power but has developed less than any other continent	Water power resources throughout the world can undergo extended development for the benefit of humanity
Sawing logs by hand	Hand sawing		
Animated Map of Asia			
Buzz saw cutting log	Buzz saw operating	More than one-half the world's people still labor at tasks which could be done by machines	As additional electrical and mechanical energy are made available, new life problems will be created for the thinking minds of tomorrow's men and women to solve
Seashore	Ocean waves beating shore		
		The power of the ocean's waters remain to be developed for the benefit of mankind	

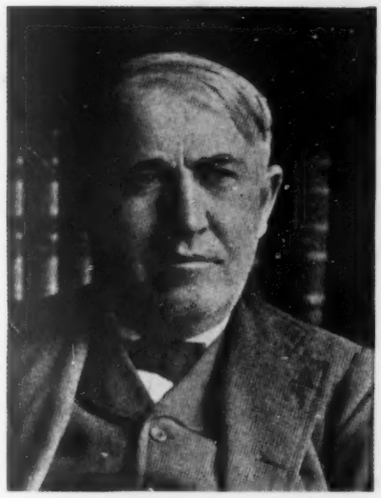
given to the preparation of inexpensive supplementary study materials for the individual pupil. Such materials would effect time and effort economies in study activities and assure adequate consideration of the salient features of the film unit by each pupil.

When the instructional sound film is used by professionally-minded teachers along the lines suggested by the foregoing, it is likely that optimum learning benefits will accrue. Such classroom utilization does not make the film showing an extrinsic or entertainment feature. It is not given as a reward for good behavior or for the purpose of providing a period of relaxation for either teacher or pupils. Rather, it provides a vivid, dynamic learning experience for both teachers and pupils, an experience identified with classroom procedure and made functional in the lives of the pupils by careful teacher planning to meet local and individual pupil needs. Only when such utilization is practiced consistently can a program of audio-visual aids be considered as an improved professional teaching technique.

Motion Pictures — Not For Theatres

By ARTHUR EDWIN KROWS, Editor of "The Spur," New York City

Here is the Fifth Installment. It seems that in 1914 many religious, social service and educational agencies were awakening to problems of screen presentation.



Thomas A. Edison not only made motion pictures practical, but he was one of the very first in America to produce films expressly for classroom showings.

OF COURSE, there were many other less spectacular trade exhibitions where films played a part. I recall screenings in improvised, canvas-draped projection rooms at the old Sportsman's Shows in New York's original Madison Square Garden. Those particular pictures happened to be railroad films; but there were many other occasions, in other convention circumstances, for showing other subjects. Films of the lumber industry proved drawing-cards in 1914, at two Forest Products Expositions, one in the Chicago Coliseum and the other in the Grand Central Palace of New York.

A highly important showing, occurring in the late spring of 1910, was arranged by the former National Board of Censorship in St. Louis at the National Conference of Charities and Corrections. The program there consisted of representative films of several types, but "educationals" were included. To make the impression completely satisfactory, the Board also provided charts and statistics to show the motion picture's social effects and opportunities. The entire program, under the same auspices, was shown again a little later, at Chautauqua, New York.

Reverting to the San Francisco Exposition, one is curious to know how the exhibitors there came into the use of films at all. Some circumstances enlisting the interest of the railroads have been sketched; but, to go further into that general picture one would have to trace the ideas of public relations as changed and developed by the public utility corporations over the next succeeding twenty years. That is scarcely necessary here.

At this particular time, in 1915, the railroads, as representative utilities, were still highly competitive, and had not progressed in point of public relations much further than the attitude of the small shopkeeper who tries to persuade his customers that every day is bargain day. For this they were not much to blame. The whole nation was going through a great, tumultous period of gestation, trying to absorb new inventions and new population; and the railroads were too interwoven in the national fabric to try dangerous experiments.

The significant railroad experiments with films were to be found, therefore, mainly in conduct of the local traction companies where problems were in easier perspective, rather than in the statewide systems where officials were generally content to say in their propaganda pictures: "Come to astounding Yellowstone Park"; "Come to sunny California"; "Come to the primitive snake dances of the Hopis." I refer specifically to only two of the local traction developments, just to indicate how their forward step was being taken. In the autumn of 1913, when Coroner Hoffman of Chicago conferred with the Board of Education in that city on the need of teaching safety, the Chicago Railways Company offered to produce an hour's film program on how to avoid street car accidents, and also stood ready to present it freely in the schools, with projection machine, operator and lecturer. In December, the same year, the Pacific Electric Railway of Los Angeles, was using films to train its motormen and conductors. But, while assigning the palm for picture progress to the local companies, we must not overlook the use of films at this same time by the Georgia Central Railroad to teach its men the causes of wrecks and safeguards against them.

The coming of pictures for employee training was foreshadowed by many small happenings, such as when, in 1915, the executives of the National City Bank of New York decided that it would benefit their workers to view Paramount's thirty-five reels on South America called, "The Land of Opportunity." These particular films, incidentally, had been produced by two cameramen, one H. D. Blauvelt, operating under the supervision of C. L. Chester, who, himself, was a former travel lecturer on the Pond circuit and maker of most of the early travel subjects for the Edison Company.

Mention of the National Cash Register Company's exhibit at the World's Fair suggests more important symptoms. It may be that employee training pictures began in some place other than Dayton, Ohio; but I doubt that they ever started with more vigor than in the plant there situated, of the National Cash Register Company. That concern was headed then by the doughty John H. Patterson, its founder and probably the greatest exponent of paternalism in American industry. Patterson is said even to have had a talking picture in his educational demonstrations before 1909, devised expressly for the purpose by his experimental engineers, C. F. Kettering and William Chryst.

Welcome to the Churches

At the San Francisco Exposition was a projection room for the Federation of Churches. Even bearing in mind the awakened film interest of ecclesiastical institutions in the United States before that time, this seems a bold step. But since 1910 the churches had broadened considerably in their view of motion picture possibilities. It already has been reported that in 1913 the Presbyterian Board of Publications had arranged with the Edison Company for films and projectors, and that in the following year there is said to have been a heavy increase in projector sales to the churches of the Middle West. Well, the revised and compressed reissue of Kleine's educational catalogue in 1915 throws some light on all this. The great spectacles, "Quo Vadis?" "Ben-Hur" and "Cabiria" are now suggested in its pages for many congregations.

Humbler efforts available through other channels, were: Kalem's "From the Manger to the Cross, or Jesus of Nazareth," five reels produced in Palestine and Egypt; a two-reel life of Christ, a two-reel "Story of Esther" and "The Feast of Belshazzar," Gaumont production shown by Elisabeth Marbury as a Holy Week program at the Berkeley Theatre, New York, in 1913; and the Hochstetter-Pierson Company's picture, made in 1912, "Pilgrim's Progress, or the Life of John Bunyan," presented with the inevitable lecture. And, very lovely indeed for the time, was "The Life of Our Saviour," a nine-reel subject in color produced by the Paris Pathé Company in Jerusalem. It was shown publicly in America first at the Manhattan Opera House, New York, in April, 1914.

Of course, much of this material was of decided interest to the Catholic churches; and many priests were asking

why it was that theatrical producers believed that there was more drama in clumsy "original" plays of contemporaneous life than in certain stirring biographies out of Holy Writ. Those unworked possibilities were to be realized in time by Cecil Blount De Mille, although in a slightly different manner than those clergymen had anticipated. Late in 1912 appeared an unauthorized, short Catholic subject, legitimate enough in its provocation to interest, but surely distasteful to many churchmen because of the brazenly advertised circumstances of its production. An Eclair cameraman had smuggled his camera into the Vatican, so 'twas said, and had photographed the new Pope. His Holiness had been completely unaware of what was going on. This short film in hand, the culprit had then built up his subject by photographing the Pontiff's birthplace and other scenes of his secular life. These, however, were not the first papal pictures; those were legitimately produced in 1898 by William K. L. Dickson, pioneer cameraman for Edison.

But probably this unhappy incident had much to do with the production of a more up-to-date, authorized picture, "Pope Pius and the Vatican," by James Slevin. This reverent film was shown at the New York Hippodrome in October, 1914. The same circumstances may have been responsible, also, for two pertinent announcements in August, 1914. One stated that there had just been incorporated, under the laws of New York State, the Catholic Film Association, capitalized at $500,000, to buy and distribute educational and amusement pictures to Catholic churches. The other said that the Emerson-Currier Cinematograph Corporation would start issuing, September 7, "The Animated Catholic Magazine" for churches, parish houses and schools of that faith.

The Catholic Film Association named, among its directors, F. A. Cavanagh, Dr. Condé B. Pallen and Roy L. McCardell, the writer. About a month later the list of new business ventures presented The Religious Pictures Corporation, but in all probability the intention of that one was to serve churches of all faiths and denominations. The Sacred and Historic Film Company, incorporated April, 1914, was probably of the same sort. I have what seems to be more than faint recollection that the Sacred and Historic Film Company was an enterprise of Eustace Hale Ball, who was editor and publisher of a racy little magazine called *Broadway Buzz*.

Even the elders of Salt Lake City were stirred to consider the potentialities of the film. In October, 1912, the Utah Moving Picture Company was announced to produce a feature called, "One Hundred Years of Mormonism." The news report suggested that the impulse may have come from enterprising film folk outside the church. But, anyway, the company was capitalized at $100,000 and production, scheduled to be completed in a month, was set at a cost of $30,000. The executives began by taking over a California concern known as the Ellaye (probably "Los Angeles") Moving Picture Company which held the rights to the picture to be made; and November 27 word came that direction would be by Norval MacGregor and the well known stage and screen star, Hobart Bosworth. In December, 1912, it was heard that the versatile Nell Shipman was to rewrite the scenario and then to do a few shorter scripts of other Mormon subjects.

September, 1913, is the next date of consequence, when it appears that "One Hundred Years of Mormonism" is being produced along with other films of not too religious a character, by the Golden State Motion Picture Company, headed by H. M. Russell of Los Angeles. The general manager is Ernest Shipman, energetic husband of the talented Nell, and the same gentleman who in years following was to organize many local film producing companies throughout the United States and Canada. He was probably the "outside impulse."

From "The Capture of Fort Ticonderoga," Edison reel of 1911. The above "patriotic" scene showed the allegedly scandalous behavior of the British garrison before the dramatic entrance of Ethan Allen, Jehovah and the Continental Congress.

In 1914 alone, Ernest Shipman represented no less than seven separate enterprises, including the Colorado Motion Picture Company, the Rocky Mountain Picture Company, Arthur J. Aylesworth Pictures, Ltd., the Pan-American Motion Picture Company and the Capital Film Company. Concerning "One Hundred Years of Mormonism," however, the rest apparently is silence.

Those who wish to understand the odd calling of Ernest Shipman more clearly, are referred to the film trade papers of 1917, where advertisements built around his portrait describe him as a "business representative for independent producers," and offer to finance, buy, sell or exploit pictures. Three years before, he had been in charge of the "Special Feature Booking Department" of Universal; and he now evidently was turning early experience to excellent account for himself.

For the Ills of Society

Railroads and churches were not alone in using the silver screen for propaganda, which is notoriously hydra-headed. American social service agencies, in another line, were still young and flexible enough to appreciate new avenues of usefulness; and they speedily adopted films for their own purposes. In 1912 the New York City Department of Health, in association with the Committee on the Prevention and Cure of Tuberculosis,—was showing the public free motion pictures on the best ways to withstand and to remedy the ravages of the White Plague. During the summer of 1913 they presented twenty-four open air shows in the same number of metropolitan public parks. The American Museum of Safety, in its 1913 convention at Grand Central Palace, in New York, exhibited films on the dangers of the city streets. In November, 1912, the Republic Theatre, of New York, gave an especial showing of motion pictures of the Floating Hospital and the Seaside Hospital for Babies for the benefit of St. John's Guild.

The American Red Cross was using films of its own in 1910. Edison produced "The Red Cross Seal," endorsed by the American Red Cross and the National Association for the Prevention and Cure of Tuberculosis, in November of that year. And I suppose that one may consistently include under the heading of social service two prison films designed to show modern humanitarian treatment of criminals — the four-reeler produced in the spring of 1914 by the Abo Feature Films Company at the Illinois State Prison at Joliet, and the picture made by World Film in the fall of 1915, at New York's Sing Sing Prison to show the much discussed methods of Warden Thomas Mott Osborne.

In contrast with "The City of Boys," produced by Selig in 1910 and dealing with a Michigan summer camp for wayward youths, mentioned earlier, it is pleasanter to note that in September, 1913, the Wedepict Motion Picture Company was producing at Glen Cove, Long Island, a seven-reeler called "The Making of a Boy Scout," to be used nationally before Boy Scout audiences. Edison distributed this film, so "Wedepict" probably meant, in some anagramatic way, "Edison Pictures."

As early as December 28, 1910, the New York *Dramatic Mirror* published an editorial on social service productions like these, hailing them as powerful instruments in warding off that perpetual bugbear of the film industry, censorship. And, as events of later years amply proved, so they were—making that editorial remarkable for its prophetic insight.

Social service may be quite sensational;

and that quality is always attractive to the small showman. So September, 1915, the Park Theatre, in New York, was used for an engagement of a German film entitled "Twilight Sleep," presented with a lecture by Dr. Kurt E. Schlossingk of Frieburg and concerning a much-touted new anaesthetic used in parturition. No matter how sacred the phase, sex in the theatre seems to be sex. In the same month two years earlier, an extensively discussed Rockefeller Foundation report on American social conditions had been seized upon by a New York concern calling itself the Moral Feature Film Company, and used as a basis for an especially sordid production, the scenario of which was allegedly written by Samuel H. London, a Manhattan newspaperman.

A rumor was started, and not contradicted by the concern, that the undertaking was financed by John D. Rockefeller, Jr., in coöperation with the Society for the Suppression of Vice, and that the first showing of the completed picture would be held at Columbia University. The management sent out a director, Frank Beal, a cameraman and a company of actors, to make certain scenes in the alleged "red light" district of New Orleans; but being virtually run out of that scandalized city, they completed their "takes" at El Paso, Texas. By this time the notoriety was too great to be ignored and, in December, 1913, Mr. Rockefeller, himself, denied that the films of the declared "traffic" had his sanction or support in any way.

The National Government itself was as interested in using films in social service as any private welfare agency. The Bureau of Mines of the Department of Commerce, and the Department of Agriculture were both very early in production of their own pictures. The former, it will be recalled, had its own theatre at the Pan-American Exposition. In the summer of 1913, the latter had been making a strong drive to educate farmers through motion pictures. In September, 1911, the Commissioner of Indian Affairs, of the Department of the Interior, was planning to save his charges by showing them films on proper living. Two months later it was announced that the national Department of Health was making a long series to instruct citizens everywhere in sanitation.

Drafted by the Government

The second decade of the century was probably when the federal Government really became ambitious to produce films better adapted to its needs than the occasional theatrical and industrial subjects which might chance to fall in its way from outside. Apparently the officials experimented at first by contracting for commercial production; then, no doubt, they found their slender appropriations depleted too soon to include the costs of distribution and general maintenance, obliging them to work the problem out for themselves, without professional assistance.

In November, 1911, the Selig Company, which had been making a number of non-theatrical subjects, chiefly under the direction of Frank Beal, announced that it had contracted with the National Government for "the exclusive right" to film the various Government activities—army, navy, plant and animal culture, Indian affairs, road building, forestry, fishing and whaling, customs and revenue services and so forth.

Now, this sounded very impressive; but on second thought, the very scope of the claim and the limitation of the contract to merely the exclusive "right to photograph" (which is not to say that the departments named actually *were to be* photographed), made the matter seem less important. Besides, there was no single authority with whom Selig could have made a binding contract of this sweeping character, while it had long been the federal custom to give all qualified citizens a chance at public work, with the corollary that the given job should go to the lowest bidder meeting the specifications. Whatever the intent of the original arrangement with Selig, his organization played a much smaller part in Government film activities than was originally indicated. However, in the spring of 1914, his men did produce a three- or four-reeler under the auspices of the War Department, "showing the preparedness of the U. S. Army."

It may have been that this Army film was a more practical outcome of the original wishes of the War Department which had led to an arrangement with the Kinemacolor Company in the fall of 1913. Kinemacolor had then announced that it would produce a series entitled "The Making of a U. S. Soldier," starting with the raw recruit and ending with the fully-disciplined man. This company's expressed claim was broad enough, too. It stated that it would make for the same Department a series on the uses of high explosives and on military evolutions—reckless claims, indeed, for a color process one of the main difficulties of which was the unsatisfactory picturization of rapid movement. Kinemacolor already had produced a medical series which had been exhibited successfully at American recruiting stations; and it now announced that the U. S. Government had contracted with the company for further films of that type. "The Making of a Soldier" was released by the U. S. War Department in April, 1916; but Kinemacolor did not make it.

Alfred H. Saunders believed passionately in school films, but would not compromise in ideas of production and distribution.

Other nations had been employing films for military training for some time. One of the most ingenious uses was by the French army in 1912. Here the practicing soldiers were confronted with pictures of an approaching enemy; and it was their duty to fire upon the foe at the most approved moment. An adaptation of this device was imported to America in 1913 by Al Woods, the stage producer, as a rifle-range novelty called "The Life Target." In this scheme, when a "hit" was made, the picture stopped on the screen and a mark showed where a real bullet would have struck.

Progressive American States were becoming more conscious of propaganda values generally; and they soon turned to films for development of their resources and markets. A number of such productions was displayed prominently at the San Francisco Exposition. January, 1914, the Seven Hundred Thousand Booster Club of Southern California had a seven-reel feature on the wonders of the State, said to have been the result of two years' incessant work by Fred L. Boruff. In July, 1914, the Industrial Motion Picture Company of Chicago, was engaged in making a World's Fair subject illustrating "all important aspects" of the State of Michigan.

In June, 1916, there occurred at the Indianapolis State House the first showing of "Historic Indiana," a ten-reel feature written by Gilson Willetts and produced by Frank Beal of Selig. Edison made the Exposition pictures for the New York Commission, including two for the New York State Department of Health, as well as a series for Massachusetts. In 1914-1915, Vitagraph shot some 70,000 feet on activities of the various New York municipal departments.

International trade and social effects of the regular theatrical motion pictures released abroad were quickly remarked as soon as the tide of production shifted and American films had begun their ascendency in Europe. The social effects previously had not been noticeable, unless someone had detected that travel films from overseas had stimulated the profitable American tourist trade. Films originating in the United States, on the other hand, were of a life less bound by tradition, and represented, besides, an actual land of opportunity about which foreign curiosity had been aroused for many years. As long as this situation redounded to the advantage of American institutions and manufacturers, Uncle Sam was not disposed to limit it; but Europe soon began counterblasts.

At Berlin, November, 1913, at a conference of representatives of the iron and steel trades, it was decided to start a vigorous German motion picture campaign for foreign markets, particularly to overcome the competition of Great Britain and the United States in the Far East. When the World War began, how-

ever, European propaganda films changed their attitude toward the United States, seeking to prove that America should lend its support to one side or the other, or even to remain neutral.

As Uncle Sam's embroilment in European troubles became more and more inevitable, the propaganda became bolder, and the appeal to reason was swept away in the usual wartime circumstances forbidding anything but an exaggerated reflection of popular sentiment. The picture-makers were generally quite willing to conform with this condition, for it was extremely profitable to them; and looking backward, it is a little appalling to realize how far the film industry was responsible then for stirring up hatreds, despite the fact that it all was done with full Government approval and connivance.

In the early years of the century, Californian immigration troubles and repercussions of the Russo-Japanese War had given rise in the United States to fear of a vague but ominous "Yellow Peril." When that had become very positive, Pathé produced a film called "Patria," in which the villains were Japs. Then we had our troubles with Villa beyond the Rio Grande, and public sentiment put aside the Yellow Peril in favor of a Mexican menace. The producers of "Patria," with their ears to the ground for signs of public preference, thereupon obligingly changed their villains to "greasers."

In the same deplorable fashion, when it finally became clear that America was anti-German, most of the producers hastened to transform their hateful characters into "Huns" and "Beasts of Berlin." And after the War they just as cheerfully produced features in which the villains were "malefactors of great wealth" who built fortunes by selling munitions at high prices during the national emergency. But then, most business men are like that; it is no exclusive characteristic of traders in motion pictures. In Revolutionary days the Yankee makers of fire-irons profited handsomely from the popular American desire to spit on the mercenaries sent by George III to conquer the "upstart colonials," by producing fire-dogs in the shapes of Hessian soldiers.

In June, 1915, Pathé introduced the first official war pictures from France, edited by the French Cinematograph Chamber of Commerce. In the spring of 1916 Charles Urban arrived at New York with the first official British pictures entitled "How Britain Prepared." Pathé released these also, and a couple of months later they were taken in hand by a new concern called Official Government Pictures, Inc., headed by William K. Vanderbilt.

In the autumn of 1919, Count von Bernstoff, one-time German ambassador to the United States, testified before a war inquiry board that, during the period of America's neutrality, he had tried vainly to persuade the German officials to send films to this country to counteract the British efforts. Actually some had come. In the summer of 1915, M. E. Claussen, Edward Lyell Fox and some other enterprising New Yorkers, had founded the American Correspondent Film Company, arrangements being made with journalists stationed by their papers in European danger zones, to have photographed and sent to headquarters the newsiest films possible; and this company's first releases, appearing in November, 1915, had included official German and Austrian pictures.

Next Month

Part Six will concern early applications of photography made from airplanes and diving-bells, through microscopes and by means of compressed action. Then the reader is plunged suddenly into the World War to witness the extraordinary effect of a national emergency in drawing the many non-theatrical loose ends together.

Back issues beginning with Part One in the September number are still available.

Politics

To all of these proved advantages of film propaganda political leaders could not be indifferent; and there were many attempts to profit from the opportunity. The press, in 1913, carried what surely was an amusing hoax, about a small French politician who obtained votes with a film showing him shaking hands with all comers, kissing the babies, leaving his auto to assist an old woman with a load of wood, and visiting a bedridden old man; but the underlying thought surely presented a workable formula.

Compaign managers of Theodore Roosevelt's "Bull Moose" party in 1912, arranged with General Film to produce pictures of their candidate. Other films of the strenuous ex-President—apparently a collection of newsreel shots made by Pathé—were used by Hiram Johnson, along with his own fiery speeches, to further the cause of the Progressive Party. In that same interesting and tumultous campaign, films—not only straight photographs but animated cartoons—were used also to elect the winner, Woodrow Wilson. It is said that this was the first national political campaign in which propaganda pictures had been used; but there must have been many persons, within earshot of the claim, who remembered that in the national election campaign of 1896 motion pictures entitled "William McKinley at Home" had been widely exhibited. Of course, lantern slides had been employed for like purposes for years.

In January, 1914, when universal female suffrage was still an issue, the Women's Citizenship Committee in Chicago, announced that films would teach members of their sex to vote in the spring elections. Of late years, to be sure, the screen has been used extensively in even small municipal elections. President Taft never strongly favored campaign films, probably because of the unending caricatures of his stoutness; but a far more pronounced conservative, Calvin Coolidge, believed so confidently in films that he even contemplated the making of campaign speeches over De Forest's newly-invented Phonofilm.

But then Coolidge, who is said to have been kept in the presidential seat, first given him by accident, largely because he had taken advantage of the new medium of radio to talk intimately to citizens at their own firesides, would naturally have a high regard for recent inventions. I myself, had a hand in making the Coolidge pictures, having edited the two short subjects which were directed and produced personally by Frank A. Tichenor. They were called "Visiting 'Round at Coolidge Corners" and "Over the Hills to Plymouth," and they were shown in thousands of theatres over the United States—the used prints subsequently being given as souvenirs to faithful Republican leaders. One of these subjects contained the much-discussed scenes of Calvin pitching hay on his father's farm.

Expressly for Schools

I HAVE remarked that in earlier years the term "educational" indicated to an exhibitor just a kind of theatrical picture, and did not necessarily mean a film for school use. Thomas A. Edison, however, self-made, self-educated, had a fond vision of his marvelous invention in the role of a great educational force. In describing that vision he was extreme, no doubt, for he repeatedly stated in his interviews that films were destined to replace textbooks; but, apart from his confusion over the respective functions of a teacher and a textbook, he was really one of the best friends educators have ever had in their work of developing the science of visual education. It was Edison who made some of the very first out-and-out school pictures ever to be produced in this country. On the whole, his attitude toward the educational system was forgiving and handsome, for as a lad he was thrown out of school on the ground that he was too stupid to learn.

Early in 1911 the Edison Company announced a series of historical films to cover important phases of the American Revolution. The first, released in July, was entitled "The Minute Man." Number Two, soon to follow, was "Ticonderoga." And there were more. The first of another series, on natural and physical science, "Crystals: Their Making, Habits and Beauty," "produced under the personal supervision of Mr. Edison," was released early in December, 1914.

Others forthcoming were listed as, "The Cabbage Butterfly," "Cecropia Moth," "Life History of the Silkworm," "Magnetism" (in four parts), and "Microscopic Pond Life." A collection of negatives under the same working title as the last-named, came into possession of Erpi Picture Consultants, Inc., about 1932; but I was assured then that it was not the Edison production. Six Edison reels, entitled "Magnetism and the Electro-Magnet," were being released by Kleine as late as 1923.

(To be continued)

AMONG OURSELVES

Notes from and by the Department of Visual Instruction, N.E.A.

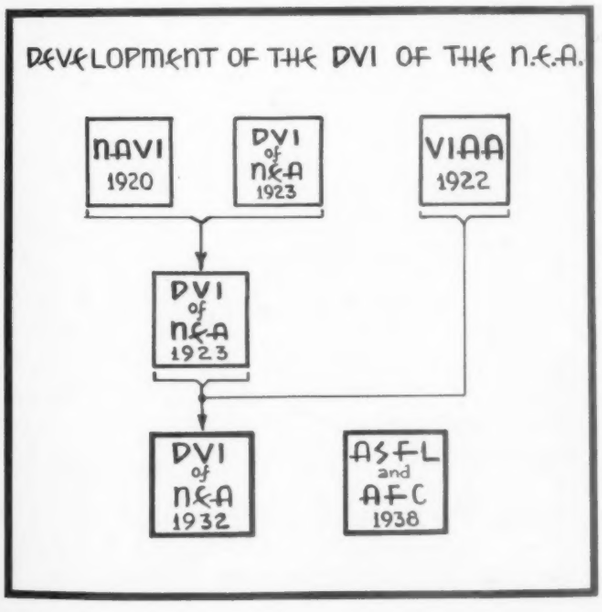
Conducted by the Editorial Committee
Etta Schneider, Chairman

We Grow Up

IT IS indeed heartening for those of us interested in promoting the visual medium of expression, to note the tremendous growth of interest in our field throughout the country. We plan to bring to your attention each month a resume of activities to date. At this time we should like to review briefly the growth and development of our national organization, the Department of Visual Instruction of the N.E.A.

The graph which appears below will indicate at a glance how we came to be. By way of explanation, we should like to describe briefly each of the agencies listed:

The National Academy of Visual Instruction was established in 1920. Its first president was Mr. William H. Dudley of the University of Wisconsin. According to its prospectus this organization was established by 40 of the leading University Extension Divisions of the country in which film libraries had been organized. Its purposes read as follows: a) To establish and maintain an organization thru which schools and other educational institutions, churches, parent-teacher associations, clubs, welfare organizations, and other societies



engaged in educational or semi-educational work may cooperate in furthering better production of and a more intelligent and systematic use of visual aids such as motion picture films, lantern slides, charts, art collections, exhibits, and models; b) To prosecute research in visual instruction methods and materials, make educational tests, make and publish observations on the socializing influence of the 'movies,' etc.; c) To investigate sources of supply and put members in touch with the best films and slides, etc. suited to their purposes as rapidly as such materials become available; d) To maintain an authentic clearing house of information on all matters pertaining to visual education, such as publications, inventions, and discoveries whose worth has been established, etc.; e) To devise methods of cooperative buying, renting and bargaining; f) To promote in every way possible the knowledge and use of better films and slides and other visual education aids; g) To promote universally the cause of, and equipment for visual instruction service. . . . .

Membership in this Academy was limited to persons affiliated with educational institutions. For the most part these were members of State University Extension Departments.

At its first national convention, held on the campus of the University of Wisconsin in July of 1920, the speakers were the Commissioner of Education of the U. S. Bureau of Education (P. P. Claxton), and Governor of Wisconsin (Emanuel Phillip).

In 1927 the Academy published a Visual Instruction Directory. After its merger with the Department of Visual Instruction, this Directory was published under the sponsorship of the latter organization (1933).

The Visual Instruction Association of America was organized in 1922. Its first president was Ernest L. Crandall of New York City. This organization was to serve the needs of local directors of visual education, especially those in the East who could not actively participate in the activities of the "Western-inspired" Academy of Visual Instruction. Representatives from commercial companies were encouraged to take active part in this organization, which the Academy did not permit. Two handbooks on visual instruction, published by the Association, were distributed without charge.

After the fusion of the Academy with the N.E.A. Department of Visual Instruction, the Association continued to operate as a separate organization. However, in 1932 it applied for affiliation with the Department and has more or less retained its identity as the Metropolitan Branch of the D. V. I.

The Visual Instruction Department of the National Education Association was established upon the recommendation of a Committee on Visual Education in 1923. Its first president was H. B. Wilson. Through this group there was greater opportunity for classroom teachers and other educational workers to study the possibilities for visual instruction.

One of the most important contributions of the Department has been its leadership in the Wood-Freeman

experiments, which Eastman Kodak Company financed.

After fifteen years the Department is still active in promoting the ideals set forth by its predecessors. Its members have done much to promote a wholesome interest in the educational values of visual aids. It is perhaps time, however, that certain of the original objectives should be revised to meet changing educational needs. This is a problem for the immediate future.

The Association of School Film Libraries was established early in the Fall of 1938, under the sponsorship of the American Council on Education's Motion Picture Project, with a grant from the General Education Board. Its director is Fanning Hearon, recently of the U. S. Department of the Interior Film Division. It has as its chief purpose the creation of a systematic channel for distributing non-theatrical films on a non-profit basis, faintly reminiscent of the 1920 objective of the early National Academy of Visual Instruction, 'to devise methods of cooperative buying, renting and bargaining.'

In close connection with the Association, there has been established an *American Film Center* under the direction of Mr. Hearon, Donald Slesinger, and Alice V. Keliher, through which producers of motion pictures will be advised and directed along educationally desirable lines.

Query of the Month

In this issue we should like to initiate some discussion among our members regarding issues or problems over which there appears to be difference of opinion. Please communicate with the chairman of the Editorial Committee, so that your judgment on the question may be printed next month.

A recent news item in a Sunday edition of one of America's greatest newspapers stated that there are no good educational films on the market. Perhaps the author of this article has a new product to launch, and is quick to assert that his films are the best ever made.

In the light of your experience with motion pictures for education, do you agree that there are no good educational films on the market?

New Jersey Visual Meeting

The New Jersey Visual Education Association held an "Exhibit-Conference-Demonstration" on Audio-Visual Aids in Education at State Teachers College, Jersey City, Monday, January 16, 1939. A half-hour of conferences and clinics on "Uses of Visual Aids in the Subjects of the Curriculum" preceded the regular program which covered the following topics: "Advantages of the New Type Stereographs," "Movies of the Making of Home-Made Glass Slides," "Modern Uses for Opaque Projection," "Review of a Recent Teaching Sound Film," and "Stepping up Silent Movies—Scenes taken in Picturesque China."

Dr. Walter F. Robinson, President, N. J. Visual Education Association, presided as chairman of the meeting.

PROGRAM

DEPARTMENT OF VISUAL INSTRUCTION

Annual Convention of the American Association of School Administrators

February 27—March 1, 1939, Cleveland, Ohio

Department Headquarters—Hotel Carter

Monday, February 27, 1939

1. Registration—Blue Room, Hotel Carter
2. Opening Luncheon, 1:00 P. M.—Hotel Carter
3. General Meeting, 2:00 P. M.—Ball Room, Hotel Carter

   The Superintendent of Schools Looks at Visual Instruction

   A symposium by representative superintendents of schools.
4. Dinner Meeting, 6:30 P. M.—Rainbow Room, Hotel Carter

   Greetings by Dr. Reuben A. Shaw, President of the National Education Association

   Motion pictures and filmslides of the New York City meeting of the N.E.A. will be shown.

Tuesday, February 28, 1939

1. General Meeting, 9:30 - 12:00 noon—Ballroom, Hotel Carter

   Demonstration of New and Significant Visual Aids

   This will include materials suitable for social science, natural science, primary reading, and other subjects on the elementary, junior high, senior high, and college level.
2. Informal Luncheon, 12:30—Hotel Carter ($1.25)
3. Business Meeting, 2:00 P. M.

   Reports of Committees, etc.
4. Dinner Meeting

Wednesday, March 1, 1939

1. General Meeting, 9:30 - 12:00 noon

   The School Journey As an Aid to Instruction

   Speaker: Mr. S. B. Zisman, Texas A. and M. College "Studying Community Resources through the School Journey"

   Opportunities for school journeys will be provided through visits to outstanding points of interest in Cleveland.
2. Luncheon Meeting, 12:30—Hotel Carter ($1.25)

   Jointly with the Department of Secondary Education of the N.E.A.
3. Joint Meeting with the Department of Secondary Education—2:00 P. M.

   Visual Education In Secondary Schools

   Speaker: Dr. A. J. Stoddard, Superintendent of Schools, Denver, Colo.

   New motion pictures for education will be shown.

EDITORIAL

A New Project For Evaluation of Educational Films

THE national teaching situation today, with specific regard to the use of motion picture films, is as follows: (1) There are thousands of "educational films" available from several hundred sources; (2) these films are of very uneven value for teaching purposes; (3) and out of these thousands of films, thousands of teachers are selecting from ten to a hundred films annually for classroom use—are often making these selections, perforce, without adequate data at hand for determining value—and results, therefore, are all too frequently disappointing. The primary need in such a situation is for significant and trustworthy evaluations of existing films, and of new films as they appear, which will promptly reduce and ultimately eliminate guesswork in film selection for teachers, schools and school systems. A substantial fraction of American teachers have the benefit of an efficient State or City bureau of visual instruction which does the evaluation and selection for them, but the great majority of classrooms must still endure the trial-and-error method.

This vital need for film evaluation has been keenly felt for years. Resolutions, proposals, plans, projects, committees, with countless "score cards," rise and fall like the tides, but anything like a national service within reach of the teachers seems to be still unrealized. The two chief difficulties in the problem are, first, to secure evaluations more meaningful and reliable than any individual's opinion and, second, to make these evaluations readily accessible to the teaching rank-and-file throughout the country. Full solution of a problem of this magnitude will require a systematic effort more powerfully financed than any yet made. But THE EDUCATIONAL SCREEN now has a project under way which it believes will prove of immediate value to the field and a definite step toward ultimate solution of the problem.

Preparations Completed

THE plan involves (1) gathering concise evaluations of educational films by teachers as they actually use them in classroom or auditorium, (2) achieving thereby a steadily larger consensus of professional opinion on each film, (3) deriving therefrom an average judgment that will constitute the truest possible evaluation of the film as a teaching tool, and (4) keeping these cumulative results regularly and easily available to the teaching profession throughout the country.

The essential first step was to devise a "score card" that would not be an endurance test—that could be filled out with minimum effort and in three minutes average time by a figure or two and the mere underlining of italicized words—and yet yield data of real value. To accompany the card, a full presentation of the plan, detailed explanations of questions, and directions for procedure were prepared.

The full material in printed form was then submitted for critical reaction to some twenty leading directors and executives of State and City visual bureaus circulating tens of thousands of reels annually to their schools. Such bureaus, having already "evaluated" with extreme care the films in their own libraries, might be expected to consider further evaluating to be of doubtful value. The reaction, however, was beyond our most sanguine expectations. A nearly complete response not only showed practical unanimity in approval of the plan but the majority expressed enthusiasm for seeing it put in operation. Most helpful comments and suggestions were included. All promised the cooperation we asked. Several offered much more than we asked, and it will be gratefully accepted. The result fortifies our confidence that the project has genuine worth for the visual field as a whole and it therefore starts now, January, 1939.

The Working Plan

IT IS planned as a national, cooperative effort—evaluation of films by TEACHERS, costs and handling by THE EDUCATIONAL SCREEN. Any teacher using films in classroom or auditorium, in any subject or grade, is invited to join the work. The cooperation between teacher and magazine is clearcut:

The teacher fills out a card for each film as used, and mails it without cost or further obligation.

The Magazine supplies the cards, (Business Reply), in booklets of ten, with full explanations and directions accompanying; pays return postage; files all returns permanently, with guide card for each film behind which all cards on that film will accumulate; analyzes, averages, tabulates and prints the findings in monthly issues of the magazine and in the next annual edition of "1000 and One Films" (September, 1939).

Next—Action!

SUCCESS of the project will hinge entirely upon the simple but vital cooperation by the teachers. The supreme inducement for such volunteer service must necessarily be the satisfaction of pioneering in a service of such indubitable value to the nation's schools, both immediate and potential.

If you are a teacher using films, tell us by postal that you will join the national effort. Full material will be sent to you at once, prepaid.

If you are an official in charge of few or many schools, let us tell you how heads of other school systems are cooperating in the project.

If you know of teachers actively using films, send us their names and we will invite their cooperation by letter.

NELSON L. GREENE.

NEWS AND NOTES

Being brief notations on significant doings and events in the visual field.

Conducted by Josephine Hoffman

Audio-Visual Aids in English

A committee of Newark English teachers, under the chairmanship of William Lewin, has prepared the following six-point plan for the development of audio-visual aids in connection with a revision of the Newark course of study in English:

1. That there be a permanent advisory committee on the evaluation of new audio-visual materials to be used in the teaching of English.
2. That audio-visual materials be segregated and classified in relation to subject-matter areas, so that teachers may know exactly what aids are available in each of the units of instruction.
3. That the field be defined to include photoplays, stage plays, radio programs, lantern slides, maps (including literary maps, outline maps, etc.), wall pictures, charts, models, film strips (picturols, film slides and still films), phonograph records and phonographs, speakophones, natural objects to illustrate references in literature, field trips, miniature pictures for notebooks, vocal solos and instrumental aids needed to correlate music and poetry, period costumes, period objects, photographs, pictorial magazines, rotogravure section, bulletin boards, and blackboards.
4. That emphasis be placed on pupil activity—pupils to operate motion-picture projectors, stereopticons, phonographs, etc.; pupils to develop the use of bulletin boards, to make their own lantern slides, charts, posters, etc.
5. That a permanent, but ever-changing, exhibit of new and standard audio-visual materials and devices be maintained in the department of visual instruction and that a traveling exhibit of such materials be routed through the schools.
6. That a frontier group within the committee be assigned to investigate new sources of materials, new methodologies, and new techniques in this field, with a view to keeping teachers informed of the rapid development of new aids and of places where good work in this field may be seen.

WANTED

The following back issues of EDUCATIONAL SCREEN

1928: April, October
1929: April, May
1930: February, March, October
1931: February, March, April, May, June, September, October
1932: January, February, March, April, May, June, December
1933: February, May, September, October, November, December
1934: January, February, May, June, September
1935: January, February, March, April, May, June, September
1936: January, February, March, April, May, June, September, December
1937: January, October

If any of our readers have these issues to spare, we will pay a fair price for all copies received in good condition.

EDUCATIONAL SCREEN 64 E. Lake St. Chicago, Ill.

Motion Picture—Consumer Education Program

The Department of Commerce has undertaken to sponsor and provide national distribution for a series of talking pictures dramatizing the aims, processes, achievements, and ideals of American industry, and the contribution of industry to our national development. These programs will consist chiefly of feature films on industrial subjects such as "Aircraft," "Meat Packing," "Automobiles," "Construction," "Clothing," "Office Equipment," "Canning," "Glass making," "Insurance," etc. There will be industries which will warrant briefer stories of one and two reels.

The Department plans with the assistance of the U. S. Chamber of Commerce and its affiliated Chambers and other business organizations, to set up in each city a permanent Committee on Consumer Education to sponsor the showing of these pictures to consumer groups in all cities. These film subjects will also be supplied to schools, clubs, churches, and other groups using films.

Historical Film for 1939 Fairs

More than 2,000,000 feet of film has been screened to select material for use in a motion picture on American history to be exhibited at the New York and San Francisco Fairs, according to an announcement by Will H. Hays, President of the Motion Picture Producers and Distributors of America. When it is completed this feature-length picture will present a graphic story of the highlights of American history as the Motion Picture Industry's exhibit at the New York World's Fair. The picture will be shown in the Federal Building at the Fair under the auspices of the United States Commission, of which Edward J. Flynn is U. S. Commissioner. Another pictorial history, which will emphasize the development of the West, is being made for similar exhibition at the 1939 International Golden Gate Exposition in San Francisco. From the vast amount of film available, 211 feature photoplays and 24 short subjects were selected as likely source material. The final picture will be assembled in fifteen main episodes as outlined by Dr. James T. Shotwell, director of the Division of Economics and History of the Carnegie Endowment for International Peace. Although the outline was prepared without any reference to available film, the committee has found such a wealth of material in films already made that it will be necessary to produce few new sequences.

Indiana Plans Regional Conferences

A committee from the Visual Instruction section of the Indiana Teachers' Association met in Indianapolis on Saturday, December 10. Mr. Virgil Mullins, State Director of School Inspection provided a meeting place and assisted in every way possible to make the meeting a successs. A tentative program made out by the committee provides for two regional conferences to be held in Lafayette and Bloomington. The programs are to consist mainly of demonstrations of the use of visual aids in the classroom. Regular classes will be taught by classroom teachers thus affording visiting teachers the opportunity for the observation of regular school work with the effective use of audio-visual aids. Ray B. Linville and Prof. Justus Rising are in charge of the Lafayette meeting. Pauline Ellis and Loren Ashbaucher assume leadership for the Bloomington conference.

The committee also formulated plans whereby they hope to make the Indiana Visual Instruction group an affiliated organization with the Visual Instruction Department of the National Education Association.

Oklahoma Progress

With an all time high of 500 bookings of 16 millimeter films during the month of November, the department of visual education of the extension division of the University of Oklahoma is feeling a need for a larger and more complete collection of visual aids, Boyd Gunning, department director, announces.

The more than 400 reels of films that made up these bookings are listed and described in detail in the new illustrated visual education bulletin that is just off press. Among these educational sound motion pictures, 17 subject matter areas covered include primary, secondary and college levels.

Since beginning of school, the department has photographed hundreds of athletic and general activity events. Continuing his explanation of the new production unit of the department, Gunning says that they have been working on two or three motion picture films. The one nearest completion is a nursery school film produced in cooperation with the school of home economics.

Bell & Howell Visual Education Forum

406 prominent educators and principals of Chicago area schools assembled during December as guests of Bell & Howell Company. The event was an invitational to Chicago's first Visual Education Forum, following the pattern originated by Bell & Howell on the West Coast and carried out successfully in various other sections of the country.

Prominent educators appearing as speakers were, in program order: Guest speaker, Dr. Harvey B. Lemon, Professor of Physics and Director, Introductory General Course Physical Science, University of Chicago; Paul G. Edwards, Director, Science and Visual Instruction, Chicago Board of Education; Mrs. R. M. McClure, President, Better Films Council of Chicagoland; E. C. Waggoner, Director, Science and Visual Instruction, Elgin High School; J. C. Hansen, Chief, Bu-

A New Visual Teaching aid

the Spencer Delineascope

for 2" x 2" slides

THE Spencer Model MK Delineascope is an entirely new development — a quality projector of exceptional efficiency, yet of compact size. Best of all, it is moderately priced — only $22.50.

Its Spencer optical system projects images of a uniform brilliance and clarity heretofore possible only with higher priced projectors.

You will find in this instrument, special advantages of design and construction, which make possible the addition of attachments for projecting roll film and for viewing strip film before making slides.

Film protection is assured. A large, well ventilated lamp house keeps the equipment cool enough to handle at all times. This new projector is ideal for the classroom, home or club.

To appreciate the full value of this new delineascope, you must see it in use.

Write Dept. N12 for a demonstration and descriptive literature.

Spencer Lens Company

MICROSCOPES
MICROTOMES
PHOTOMICROGRAPHIC EQUIPMENT

BUFFALO, N. Y.

REFRACTOMETERS
COLORIMETERS
SPECTROMETERS
PROJECTORS

Show The Right Way With **PICTUROLS**

And This Handy Easily Carried

Tri-Purpose PROJECTOR

Save time, add interest to lectures and make every subject clearer by visualizing facts with S. V. E. Picturols. These convenient rolls of 35 mm. film contain series of still pictures, which can be projected life size with the compact, easily carried S. V. E. Tri-Purpose Projector. The Tri-Purpose unit shows not only the standard S. V. E. Picturols from the S. V. E. library but also other filmslides including those made with ordinary miniature cameras. The projector takes both single and double frame film.

In addition the Tri-Purpose has a slide carrier for showing black and white, or Kodachrome or Dufaycolor transparencies mounted in 2" by 2" glass slides.

Write today for catalog containing the world's largest listing of Picturols and filmslides and literature on S. V. E. Tri-Purpose and other projectors.

SOCIETY FOR VISUAL EDUCATION, INC.

Manufacturers, Producers and Distributors of Visual Aids

Dept. 1ES, 327 S. LaSalle St., Chicago, Ill.

"PINOCCHIO"

A 7-reel, 16mm sound-on-film motion picture produced especially for showing in schools, churches, etc. State rights now available to qualified distributors.

TOWER PRODUCTIONS, INC.
3337 Wilshire Blvd., Los Angeles, Calif.

Make Your Own Ground Glass Slides

easily and quickly, by using GLASSIVE, an abrasive which makes ground glass slides from plain cover glass for only a fraction of a cent each! 50c package.

For Non-Photographic Slides

use CELLOSLIDE. Has many uses—for enlarging illustrative materials, for making song slides, announcements, cheers, etc. Eliminates necessity of writing on glass. 500 sheets for $1.00.

TEACHING AIDS SERVICE
JAMAICA PLAIN MASSACHUSETTS

New 16mm s-o-f Traveltalks

"WASHINGTON, the Nation's Capitol"

"CITY OF PROUD MEMORIES"
(CHARLESTON, S. C.)

Send for catalogue of rental films

Lewis Film Service
105 EAST 1st ST., WICHITA, KANSAS

College, High School, Grade Teachers

We Place You In The Better Positions
Our Territory Middle West and West

UNEXCELLED SERVICE

ROCKY MT. TEACHERS AGENCY

EST. 1906 MEMBER NATA

410 U. S. Nat. Bank Bldg., Denver, Colo.
WM. RUFFER, Ph.D., Manager

MINNEAPOLIS, MINN., Plymouth Bldg., A. Gloor, A. M., Mgr.
Largest, Most Successful Agency in the West

reau of Visual Instruction, University of Wisconsin; Donald Bean, University of Chicago Press; and P. W. Fitzwater, Science Department, Lake View High School, Chicago. The talks, including impromptu comments by Chicago Board of Education President James B. Mulcahey, covered all phases of Visual Education and the need for its continuance and amplification in schools everywhere.

A much commented upon variation in the program was the premier showing of the new Bell & Howell sound film *How Motion Pictures Move and Talk*. Later the Erpi film *Bring the World to the Classroom* furnished another interesting picture interlude.

Near the close of the meeting Mr. Bean anticipated the closing remarks of Bell & Howell's F. G. Roberts by suggesting that the Visual Education Forum be taken over by the educators themselves, making it a permanent educators' organization holding an annual Midwest meeting. Mr. Roberts confirmed this suggestion as summing up Bell & Howell's purpose in conducting the first Chicago forum. The meeting closed upon the probability that the Visual Education Forum for the Central West would be perpetuated along the lines suggested, and enthusiastically approved by all in attendance.

A Visual Program for Vocational Schools

(*Concluded from page 7*)

Regular Visual-library films are scheduled for one week, while the out-of-town films are scheduled on definite days, and are returned on specific dates. All films received are listed on the Daily Bulletin to the teachers. Special industrial films (silent and sound) of general interest to combined groups are also shown in the auditorium, when the seating capacity of the lecture room is inadequate. The students from thirty shops receive their related work from nine related teachers, or in combination groupings, where the trade subjects are closely associated. These larger groups see special sound pictures in the auditorium during academic week. Shop teachers also use selected films and exhibit them in the shop lecture room, located in the shop building.

Extra Curricular Use

One educational, and occasionally two feature pictures, of one hour length, are supplied by the Visualization Department for assembly programs each month. These feature pictures are chosen for their cultural, historical, and educational content, to balance the industrial and technical films used in the classrooms. The Frick Education Commission supplies one guest speaker each month, leaving two assembly dates open for school programs.

Student Activities Use

One feature picture, strictly entertaining, is booked every month by the school for Activities fund-raising purposes, since no appreciable receipts are derived from athletics. The student enrollment and turnover in the Vocational Schools permit only Varsity participation in Junior Soccer; Senior Swimming, Golf and Basketball, with other Pittsburgh High Schools. Football—generally the major source of revenue—has been found to be too expensive, and the competition with four-year

THE OUTSTANDING TRAVEL SUBJECTS
"PORT O' CALL" FILMS
Produced by Deane H. Dickason
Noted Lecturer and Traveler
AVAILABLE IN 16 MM.
SOUND **SILENT**
POST PICTURES CORP.
723 Seventh Ave. New York City

standard High Schools unequal on a basis of yearly attendance and development. Another factor eliminating the use of our older and experienced students is our Cooperative Employment system, rendering these students physically unable to compete, and unavailable during the two-week period at work. Activities tickets are purchased on the installment plan and no monies are received at the auditorium doors. These tickets permit students to attend all basketball and soccer games, see feature movies, and receive the school newspaper. Practically all funds are raised through motion pictures.

Administrative Use

One of the real problems of the modern High School is the noon lunch period, with its characteristic loitering and congestion of corridors and hallways. This problem was solved several years ago at Connelley with the introduction of noon moving pictures during the last ten minutes of the lunch period. Several of the large Junior and Senior High Schools, in Pittsburgh, are now showing noon movies to eliminate this congestion. The idea originated at Connelley.

This entire visual program now serving the school in four distinct ways, requires the services of the following teachers and shop instructors to supervise the ordering, receiving, shipping, bulletin notices, operation and maintenance of all films, projection and sound equipment.

1. Preliminary requisitions	Related teachers
2. Completed requisition	Director of Activities
3. Receiving, checking, and bulletin to teachers	Mr. Fogg and movie crew
4. Projection maintenance and service, also 16mm-sound	Movie crews from Electric Power Shop
5. Sound equipment (Western Electric) also 35mm-sound	Mr. Black and Sound crew
6. Scoring and forms (Curricular)	Mr. Fogg
7 Scoring features, serials, and news reels	Director of Activities
8. Film projection supervisors (35mm films)	Mr. McKerahan and Mr. Evancho
9. Awards to Movie and Sound Crews for service rendered (Monogrammed emblems designating service)	Director of Activities

The writer submits this mere outline as evidence that definite organization contributes greatly to the effective functioning of a visual program in a public school.

VICTOR REFUSED
to *"Let well enough alone"*

SO, THE WORLD'S MOST WIDELY USED 16 MM SOUND PROJECTOR GETS A
New, Super Endurance *Mechanism!

ANIMATAPHONE Leadership dates from almost the very beginning of 16 mm sound. Continuation of that leadership has been made secure, for LOOKING AHEAD, Victor has created for TODAY'S 16 MM PROJECTOR USERS a Super-Endurance *Mechanism that anticipates the performance demands of the future!

Not only does this epoch-making advance in mechanism design provide definite assurance of UNPRECEDENTED PERFORMANCE, but it dwarfs service and parts-replacement problems to a mere nothing! A five year study of servicing records and user reports . . . on machines definitely known to have seen greater than average use . . . served as the guiding influence in the creation of this new Master *Mechanism.

***New* EFFICIENCY — *Greater* ENDURANCE to MORE than meet modern-user needs for heavier duty Projection Equipment**

★ ★ ★

Just a few of the highlights of VICTOR'S *new* SUPER ENDURANCE MECHANISM are:

FEWER MOVING PARTS . . . "STRIP-PROOF" GEARS . . . LIFE-TIME BEARINGS that need NO OILING . . . 300 PERCENT STRONGER CAM-ASSEMBLY . . . NO FLICKER even at sub-normal speeds . . . INCREASED FLATNESS OF FIELD without loss of light . . . INCREASED SMOOTHNESS and CLARITY in sound reproduction due to improvements in Filter and Optics.

So . . . UP goes the efficiency curve and DOWN goes the upkeep cost—if you choose the **new** ANIMATOPHONE . . . priced at $275 up! Demonstrations, without obligation, gladly arranged. *Write today!*

****Available now in the New, Improved Model 33, 31 and 36 Animatophones. Soon available in all Animatophones and VICTOR SILENT Projectors.***

VICTOR ANIMATOGRAPH CORPORATION
DAVENPORT, IOWA
Chicago Los Angeles New York
ANIMATOPHONE 16m SOUND PROJECTORS

NEW RELEASES!
BEACON MOVIES

"DICTATORS or DEMOCRACY?"

A sensational scoop! A photographic comparison of true conditions under enslaving Dictatorship vs. the Freedom of Democracy between which the world must choose. Mussolini, Stalin, Hitler and Battista — or the American Way. Enlightening, historical, and fascinating entertainment.

★

"WHY HITLER?"

Exciting inside story of Hitler's rise to power! Evidence of underground plotting of revolt, secret drills, true conditions never before shown on any screen.

★

"WINTER CARNIVAL"

See an ice race behind horses! 80 miles an hour on skis! Hair-raising tobogganing. Spills! Thrills! Graceful skating by champions—an unending wonderment!

★

"STRANGE AFRICA"

Wild game hunting under terrific heat of jungle and desert. Familiar and strange animals in their natural haunts. Sights seldom seen by man.

★

"WORLD BY-WAYS"

A tour of little known places and pastimes from the corners of the world. Egypt, Algiers, Italy, Norway, Sweden, the Sierras—a stimulating journey of great instructive value.

★

"FUZZY'S SHOPPING SPREE"

Rollicking shopping adventures of Fuzzy and his pals — the comical, trained chimpanzees. Grand entertainment for everyone!

PRICES

8mm-50' $1.75; 180' $5.50. 16mm-100' $3.50; 360' $10.00. Sound on Film-350' $17.50.

At Your Dealer or

If your dealer has not as yet received his supply, order direct.

Beacon Films

43 E. Ohio St., CHICAGO, ILL.

BEACON FILMS
43 East Ohio St., Dept. 10E, Chicago, Ill.
Please send me the following Beacon Films.
I enclose $..... in check or money order.
Title..... Length.....
Title..... Length.....
Title..... Length.....
Name.....
Address.....

Current Film Releases

Classroom Film on Poland

The newest addition to the Eastman library classroom films is *Poland Today,* a particularly timely subject since this country is an important factor in the present European situation. The film shows various scenes in the capital city of Warsaw—buildings, parks, market place, shops and new housing projects—and in Gdynia, a seaport city on the Baltic, where Poland's principal exports, lumber and coal, are loaded. Two types of farming are portrayed — the large wealthy estates with their overseers, and a typical small farm operated by the peasant owner. The home life, customs and occupations of the peasants are shown. Also included in this interesting reel are various types of Polish schools —a kindergarten and primary grade, handicraft, wood carving and sculpture.

Poland Today may be purchased from the Eastman Kodak Company, Teaching Films Division, Rochester, New York.

Gutlohn Announcements

Walter O. Gutlohn Inc. have arranged to release another Bobby Breen picture in 16mm. sound entitled *Rainbow On The River,* which deals with the aftermath of the Civil War in the strife-torn South. This new musical feature boasts of a strong supporting cast for the singing youngster, including such well-known stars as May Robson and Charles Butterworth. Particularly effective is the singing of the famous Hall Johnson choir.

As the result of a conference held in Chicago last month between Walter O. Gutlohn Inc. and Ideal Pictures Inc., arrangements have been made to have Ideal Pictures Inc. distribute all the Gutlohn 16mm. sound and silent educational subjects in conjunction with the Gutlohn organization. Under this new arrangement, film users have the convenience of dealing with either firm on an identical rental or purchase basis. The British Documentary films for which Walter O. Gutlohn Inc. possess exclusive distribution rights will likewise be available through Ideal Pictures Inc. as they are released.

College Produces Two Movies

With plans announced for two films to be produced this year on the campus, Carleton College at Northfield, Minnesota, becomes one of the first colleges in the country to make a movie with sound. The drama department will make a color film, *A Tour of Carleton College,* to be used by the office of admissions. The other picture will be a full-length feature. The story will be pure fiction acted by Carleton students.

The camera equipment will be complete in every detail. A large assortment of set-lights will be utilized and a microphone boom with a special mike will pick up the actors' voices. The sound booth will have a glass front and will be of special construction. A camera truck with wheels will carry the photographic equipment so that scenes, and even dolly shots, may be taken at practically any locale on the campus.

Bell & Howell Technicolor Subject

Another very recent addition to the Bell & Howell sound film library is a color film which is the first direct reduction by Technicolor of a major Hollywood cartoon production. The first release is *Jolly Little Elves,* the charming fairy-tale of the poor cobbler who befriended a hungry elf, and was repaid by the nocturnal labors of the whole elfin clan until fame and wealth were his. Other titles in the series include *Candyland, Fox and Rabbit, Springtime Serenade, Three Lazy Mice* and *Toyland Premiere.* All are Universal releases, exclusively distributed in 16mm. by the Filmosound Library.

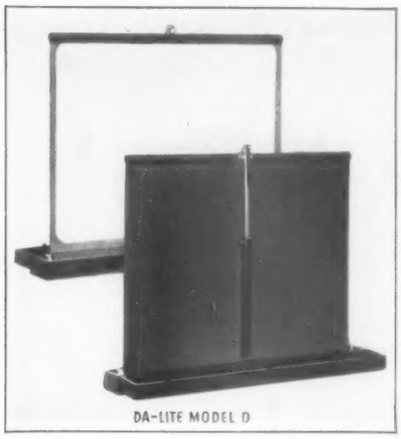
Travel Series

Post Pictures Corporation, 723 Seventh Avenue, New York City, now control exclusively the 16mm rights, sound and silent, on the well-known series of travel pictures, *The Port O' Call,* made by Deane H. Dickason, noted traveler and lecturer. These thirty-one single reel subjects are intimate studies of the peculiar habits and customs of people in foreign lands—romantically entertaining as well as instructive. Countries visited include India, Japan, Ceylon, Siam, Cambodia, China, Egypt, Palestine, Singapore, Samoa, Bali, Philippines, Java, Papua, Fiji, New Zealand, Australia, Havana, Panama, Palma de Mallorca.

New Educational Science Subjects

Ufa Films Inc., 729 Seventh Avenue, New York City, announce the release of four new short subjects. *The Sensitivity of Plants, Plant Power, Moving X-Rays, Liquid Air,* in 16mm sound and silent as well as 35mm. The pictures may be purchased or rented. With the aid of delicate recording instruments and time-lapse photography, in *The Sensitivity of Plants,* reactions of plants over a 24-hour period are made visible. The amazing energy of plants is studied and analyzed in *Plant Power.* The remarkable properties of X-rays are portrayed in *Moving X-Rays,* followed by the use of X-Ray photography and X-Ray treatment of diseases. The structure and functioning of the inner organs of human beings are shown. *Liquid Air* demonstrates how air, oxygen, neon, hydrogen and helium, are liquified. Eggs and other subjects are

(*Concluded on page 35*)



DA-LITE MODEL D

WHAT ARE YOUR Projection Problems?

1. Clear Pictures in Semi-Dark Rooms?

For classrooms, difficult to darken, many schools use the Da-Lite Da-Tex rear-projection silk screen. It is absolutely free from graininess and assures a uniform diffusion of light, so essential to bright, clear pictures. Sizes range from 15″ x 20″ to 36″ x 48″. The screen is mounted in a sturdy frame which fits onto a Da-Lite tripod.

2. Brighter Pictures Without Glare?

For average projection conditions, leading educators, more and more, are using Da-Lite Glass-Beaded Screens. Da-Lite's advanced process of applying the beads to the fabric results in maximum brilliance without sparking or glare. Available in many styles — hanging models, table models, including the Model D in leatherette-covered box, and the convenient Challenger.

3. Less Confusion Getting Ready?

Convenient operation has characterized Da-Lite Screens for 29 years. Da-Lite portable screens are light in weight, easily carried, and can be quickly set up. The Challenger, consisting of screen, metal case and tripod can be set up anywhere in 15 seconds. For large classrooms and auditoriums, Da-Lite's new electrically operated Electrol Screen combines the utmost convenience with maximum protection for the screen fabric.

With Da-Lite Screens, you can solve any projection problem readily. Write for literature and name of nearest dealer!

DA-LITE SCREEN CO., Inc.

Dept. 1ES, 2723 North Crawford Ave., Chicago, Ill.

DA-LITE SCREENS

REG. U.S. PAT. OFF.

Meet Every Requirement

SCENE FROM "This Moving World"—the good old days, just after the turn of the century.

Don't miss it!

A vivid, dramatic portrayal of the development of transportation—

"THIS MOVING WORLD"

"THIS Moving World" already has been shown to more than 600,000 school children throughout the country. The use of this dramatic, 30-minute sound motion picture is offered *free to directors of visual education, and is available in both 16 mm. and 35 mm. sizes.**

An interesting, fast-moving and historically accurate Hollywood production, "This Moving World" is based upon the "Outline History of Transportation" edited by Dean Archibald L. Bouton, of New York University. The film tells vividly the thrilling tale of man's conquest of time and distance from the discovery of the wheel to the introduction of the streamlined passenger train, the transoceanic airliner and other modern forms of conveyance.

***The only charge for the loan of the film is payment of the nominal express charges to and from Detroit.**

For further information write

FISHER BODY DIVISION

General Motors Corporation

Detroit, Mich.

When you write, ask about the "First Century of Baseball" and "Let's Go Fishing," two other Fisher Body films soon to be released on similar terms.

IN AND FOR THE CLASSROOM

Conducted by Wilber Emmert
Director Visual Education, State Teachers College, Indiana, Pa.

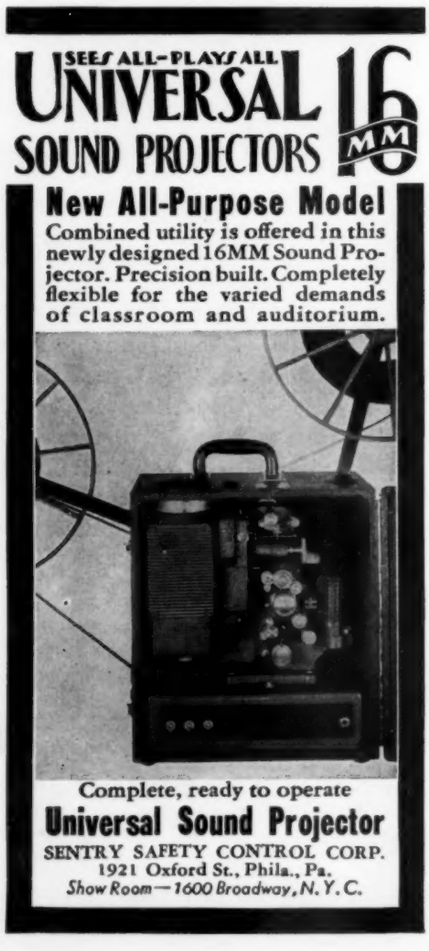
Electrical Problems Clarified Through Trip To Power Plant

THE General Science Unit, "Generating and Using Electricity," presents many difficulties to the Junior High School pupils, due to their lack of experiential background in this area, the persistent shroud of mystery surrounding "anything electrical," and the difficulty many minds experience in gaining basic concepts through the use of miniature, model generating devices used in most school laboratories. Fundamentally, the laboratory apparatus and the commercial electrical appliances are identical, but many persons, young and old, fail to see such relationships, and experience difficulty in transferring their "laboratory thinking" to life situation set-ups.

If, however, a power plant is easily accessible, and a well planned school journey is taken to the institution, the resulting sensory experiences will form bases for a better understanding of electrical phenomena through the textbook study and the accompanying laboratory work.

For maximum results the trip must be well planned. This involves a consideration of the advantages of the school journey over other types of class activities, the purposes of the lesson, a survey of the plant and the preparation of a laboratory sheet of directions and suggestions, making arrangements with the school authorities and those in charge of the plant, pupil preparation for the visit, taking the trip, and plans for correlating the school journey lesson with the other activities of the unit.

The trip may serve as an introduction to the unit, or it may be taken at a later point in the study of the problem. The sequence-placement of the school journey lesson, will, however, materially affect the plans for this activity. The accompanying lesson plan is designed for use after some progress with the work of the unit.


SEES ALL-PLAYS ALL
UNIVERSAL 16 MM
SOUND PROJECTORS
New All-Purpose Model
Combined utility is offered in this newly designed 16MM Sound Projector. Precision built. Completely flexible for the varied demands of classroom and auditorium.
Complete, ready to operate
Universal Sound Projector
SENTRY SAFETY CONTROL CORP.
1921 Oxford St., Phila., Pa.
Show Room—1600 Broadway, N. Y. C.

Teacher's Aims

1. To give the children a chance at directed observation of the generation and use of electricity.
2. To aid the pupils in understanding how some transformations of energy may be made.
3. To teach the pupils how to study materials in their natural settings.
4. To form bases for understanding the science material studied.
5. To give the children some appreciation of the work of unseen "servants of the people," and our dependence on them.
6. To lead the pupils to an appreciation of the place of electricity in our daily lives.

Pupil's Aims

1. To satisfy a natural curiosity about electricity and electrical phenomena.
2. To better understand the problems of generating and using electricity by mechanical means.
3. To better understand the "vocabulary of the electrician," through a first-hand study of electrical devices, their parts, and their uses.
4. To better understand the science material studied.

Initiating the Journey

In the study of the unit, "Generating and Using Electricity," it was discovered that energy transformations may be effected so that electricity may be produced through: use of the static machine, chemical action, use of the dynamo, and through photo-electric effects. Since the power plant is only a few hundred yards from the school building, it was suggested that the class visit the plant and secure first-hand information about electricity and electrical problems. Acting upon the suggestion, committees were appointed and plans formulated for the trip. One committee secured the permission of the school principal for the class to make the visit; another called on the superintendent of

HISTORICAL ACTION FILMS
EDUCATIONAL and ENTERTAINING
Rebellion • Glory Trail • Old Louisiana
Write for rental prices and catalog listing selected Shorts, Features and Recess Programs.
AUDIO-FILM LIBRARIES
16mm, Sound Exclusively
661 Bloomfield Ave. Dept. E Bloomfield, N. J.

the power plant, who granted his permission, and cooperated with the group in developing a guide sheet for use during the inspection tour; a third made duplicate copies of the guide sheet and distributed them to members of the class.

Pupil Preparation

A picture of the interior of the plant, loaned by the power plant superintendent served to excite interest and as an orientation device; while a review of a unit previously studied, "How the Energy from Steam is Put to Work," showed the source of power for running the generators and indicated energy transformations from coal, through heat, steam, electricity, heat, and light. Magnetism, magnetic fields, and magnets constituted the early problem of this unit, and hence, prepared the pupils for the trip. During the class work on this problem, a vocabulary of electrical terms was built up. Considerable attention was given to diagrams of generators, motors, electric circuits, and control devices.

At the Plant

Upon arriving at the plant, the pupils use the guide sheet and proceed as in any other laboratory period. The teacher, superintendent, and attendants at the plant assisted the pupils when asked to do so. The guide sheet calls for definite recording of certain items, the study and observation of other things without written answers.

Trip to the Power Plant

Generating and Using Electricity

The field trip will consume one hour, hence it will be necessary to work rapidly, observe carefully, and record accurately. Make your records while at the plant. Determine to get as much out of the trip as is possible. Make your own records, do your own work. Return to class with a great number of questions.

The trip will involve an inspection of the two parts of the power plant, the electrical room and the boiler room. The major portion of the period will be spent in the study of the electrical apparatus.

On the back of this sheet summarize the trip to the power plant.

The Electrical Plant

The source of power

Locate the steam pipe which leads to the engines.

Study the steam engine. Locate such parts as: the cylinder, piston, flywheel, eccentric, crank shaft, oiling system, the piston roon.

Observe how the engine is connected with the generator.

How many hours per day does the plant run? ————.
How many men are employed? ————. How long shifts do the men work? ————. Are accurate records kept? ————.

The Alternating Current Generators

The plant contains (one) (two) (three) (four) A. C. generators.

The Alternators produce (A. C.) (D. C.) current.

SEEING IS BELIEVING!

No matter what the subject taught . . . the mind receives fullest significance, understands with greatest clarity — if the lesson has been conveyed by the eyes!

YOU WILL EDUCATE BEST IF YOU EDUCATE PICTORIALLY!

FOR ENTERTAINMENT, NO GREATER PICTURES ARE AVAILABLE

LETTER OF INTRODUCTION
MAD ABOUT MUSIC
100 MEN AND A GIRL
THREE SMART GIRLS
THE RAGE OF PARIS
MERRY GO ROUND OF 1938
YOU'RE A SWEETHEART
SHOWBOAT
(and many others)

Write to Universal's Non-Theatrical Department for further information regarding short and feature-length pictures, travelogues, cartoons and other motion pictures.

CATALOGUE 16

UNIVERSAL PICTURES COMPANY, INC.

Rockefeller Center New York, N. Y.

CIRCLE 7-7100

Many unusual bargains offered in Central's 40th Anniversary Clearance Sale Book — just out! Everything photographic — new and used. Write for Free Copy NOW!

Central CAMERA CO.

230 SO. WABASH, DEPT. 51, CHICAGO (Est. 1899)

16MM. SOUND ON FILM
for
RENT — EXCHANGE — SALE

A few of our Large Catalogue of
RENTAL SUBJECTS

THE LOST JUNGLE ★ KEEPER OF THE BEES ★ GALLANT FOOL ★ THE GIRL OF THE LIMBERLOST ★ I CONQUER THE SEA ★ MILLION DOLLAR BABY ★ IN OLD SANTE FE ★ EAT 'EM ALIVE ★ CITY LIMITS ★ MAN'S BEST FRIEND ★ KENTUCKY BLUE STREAK ★ SILENT ENEMY ★ JANE EYRE ★ KLONDIKE ★ RUSTLER'S PARADISE ★ HEARTS OF HUMANITY ★ RETURN OF CASEY JONES ★ MIDNIGHT PHANTOM ★ NOW OR NEVER ★ THIRTEENTH GUEST ★ RED HAIRED ALIBI ★ all PETER B. KYNE'S SUBJECTS ★ all TOM TYLER, JACK PERRIN and JACK HOXIE'S WESTERNS ★ all RICHARD TALMADGE'S pictures ★ and RIN TIN TIN, Jr.

Altogether 150 Features and 400 Shorts from which to pick your programs

Not One Mediocre Picture in Our Library
Film Rental Catalogue — Film Sale Catalogue
Write for them

CINE CLASSIC LIBRARY
1041 JEFFERSON AVE. BROOKLYN, N. Y.

35 mm. FILM SLIDES
General Science, 11 rolls, $20
Principles of Physics, 7 rolls, $12
Principles of Chemistry, 8 rolls, $14

Order on approval or send for free folder and sample
VISUAL SCIENCES, Suffern, New York

RADIO-MAT
Talk from your screen with quickly
TYPEWRITTEN MESSAGES
50 Radio-Mats $1.50
White, Amber, Green
Accept no substitute
IS THE STATIONERY OF THE SCREEN

MAKE YOUR OWN
TYPEWRITER SLIDES
For Screen Projection
USE RADIO MATS
on sale by Theatre Supply Dealers
Write for Free Sample
RADIO-MAT SLIDE CO., Inc.
1819 Broadway, Dept. V. New York City

Only the Best
16mm SOUND FILM 16mm
Low rental rates include transportation charges.
Write for our new double size list.
Our rates remain at their former low level.
THE MANSE LIBRARY 2439 AUBURN AVE. CINCINNATI, OHIO

What voltage is developed? ————. How many amperes? ————. How many R. P. M.? ————.

Locate the field magnets, rotor, slip rings, brushes, outlet for current.

What purpose is served by the direct current generator on the same shaft as the rotor of the alternator? ————

Read the name plate on the alternator, and on the D.C. generator with the alternator.

The Motor-Generators

Locate the motor-generator sets. Why are they so named? ————?

For what purpose are they used? ————.

Read the name plate of the motor and the generator of the motor-generator set.

Motor: Horsepower (H. P.) ———— Volts ————, Amperes ————, Cycle ————, R. P. M. ————, Kind of Motor ————.

Generator: Volts (no load), ————, Volts (full load) ————, Amperes ————, R.P.M. ————, Kind (A.C)) (D.C.)

Locate: Armature, commutator, brushes, field magnets, cables.

The Switch Board

Of what material is the switch board made? ————. Why? ————.

Observe the various instruments on the switch board. Take the readings of the Ammeters ———— Volt-meters ———— Watt-hour meters ———— Recording meter ———— Synchronizer meter ————.

Read the name plates where the cables leave the power house for the various buildings of the campus.

Read the name plates to determine the switches for the various buildings.

In the Boiler Room

How many furnaces and boilers are there? ————. How many used at one time? ————.

Note the recording devices. Observe how the coal is taken to, and fed into the furnaces. How is the draft for the fires obtained? ————.

How much coal is used per day? ————. For what is the heat used? ————.

Note the generous use of electrical devices in the furnace room.

The Ash Pit

How are the ashes disposed of? ————.

Thru the Tunnel

Note the location and arrangement of the steam pipes. The electric cables.

In the Distributing Room

What voltage is delivered to the main lines in the distributing room? ————.

What purpose is served by the emergency lighting plant? How operated?

Checking the Results

1. Class discussion

   At the next class hour the discussion was based upon the experiences of the trip.

   From the written summaries on the backs of the guide sheets, important points were stressed and misunderstandings clarified.

   The blackboard was used to diagram some of the circuits, connections, and relationship of parts of the devices.

   The electrical terms previously studied were listed on the blackboard, together with new words acquired during the visit. Attention was given to the correct spelling and pronunciation of these words.

   Several members of the class recounted some of the "side lights" on electricity secured while talking to members of the staff at the plant.

2. The following test was given:
   a. Electricity is generated by a (dynamo) (motor)
   b. The power plant contains (one) (two) (three) (four) A. C. generators.
   c. The alternators produce (alternating current) (direct current)
   d. The commutator is a part of the (A.C.) (D.C.) generator
   e. The motor is run by (steam) (electricity)
   f. The usual house lighting voltage is (60) (110) (220) volts
   g. The voltage of a circuit is measured by (a voltmeter) (an ammeter) (a watt-hour meter)
   h. The generator of the motor-generator set produces (A.C.) (D.C.) current
   i. The hoists, stokers, draft fans, and coal crushers are operated by (dynamos) (motors)
   j. Electrical circuits are opened and closed by (rheostats) (switches)

Correlation

Using the general outline of the textbook, the important points stressed in the school journey lesson were further studied and amplified. Lights, switches, motors, fuse boxes, insulators, extension cords, fuses, conduits, and light fixtures in the classroom and around the school buildings were noted and studied. These items serve as topics for special reports by members of the class, the information being secured from science books in the science library and the junior high school library.

References

1. Pieper and Beauchamp—*Everyday Problems in Science;* 2. Wood and Carpenter—*Our environment;* 3. Lake, Harley, and Welton—*Exploring the World of Science;* 4. Van Vuskirk, Smith, Nourse—*Science of Everyday Life;* 5. Hunter and Whitman—*Problems in General Science;* 6. Other General Science textbooks; 7. The World Book; 8. High School Physics Books; 9. Science News Letter Magazine; 10. Other Science magazines.

Film Production in Schools Increasing

Within a few years, every school in the country will be making films of its own, Hardy R. Finch of the Greenwich, Connecticut, High School predicted at the annual meeting of the National Council of Teachers of English in St. Louis November 24-26, 1938. He based his statement upon a survey which showed that today over 200 schools are engaged in production of films. The productions have included literary works, student-written scenarios, and pictures based on school and community activities, local history, imaginary trips, health, safety, and guidance.

Roger Hill, headmaster of the Todd School for Boys, Woodstock, Illinois, suggested that schools film their Shakespearean productions, using a silent camera. Sound recordings could be made separately and synchronized with the picture, he added. "The chief educational value of the talking picture technique," Mr. Hill said, "is that a good performance is jelled. It is available for the inspiration of hundreds of other directors and thousands of other youngsters. I believe it can and will be a great new educational tool."

STUDENTS, SCIENCE TEACHERS

Spellbound

By These Magical Educational Films!

Natural Sciences Explained with Aid of Scientific Cinematography

PRE-VIEW audiences of students and prominent American educators have literally applauded these remarkable educational films. Being products of patience, skill, and love for the natural sciences, they reveal months of enlightening laboratory demonstrations performed by eminent European scientists. With the use of scientific cinematography, plants actually assume the characteristics of human beings. Experiments in physics disclose facts never before demonstrated in the school lab.

UFA Educational Films are the newest achievement in the dramatization of science. Now available for purchase or rental in silent or sound in 16 MM or 35 MM. Write immediately for literature describing "Plant Power," "Sensitivity in Plants," "Liquid Air," "Moving X-Ray."

UFA EDUCATIONAL FILMS
729 Seventh Avenue • New York City

See
hear and compare

HOLMES SOUND ON FILM PROJECTORS

Holmes machined projectors speak for themselves in quietness of action—clear cut definition of tone—and quality of picture.

READY TO CARRY

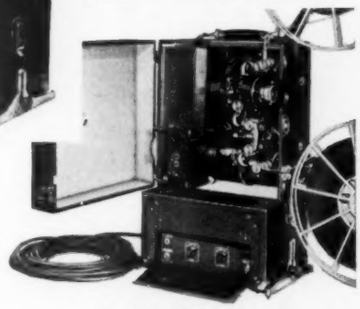
32 Pounds 28 Pounds

ONLY 60 LBS. TOTAL
Projector—Amplifier—Speaker

ASK ABOUT OUR FREE DEMONSTRATION OFFER

HOLMES PROJECTOR CO.
1813 Orchard St. CHICAGO

Holmes distributors welcome a chance to let you compare a Holmes with any projector costing up to double. They know that not even theatre equipment can belittle its operation, sound or picture quality.



Projector attached to Amplifier

16 mm *and* 35 mm
Holmes
PROJECTORS

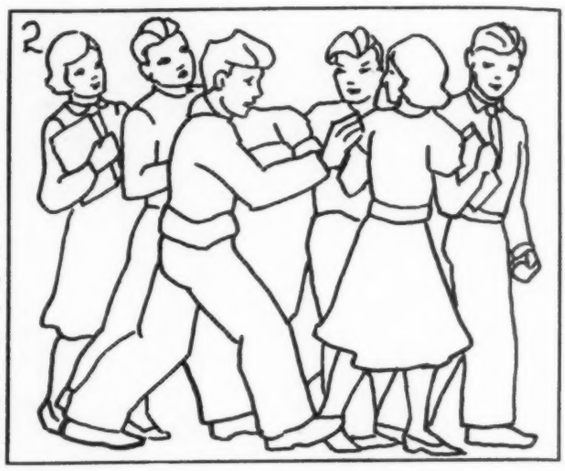
Courtesy-- Presented in Hand-made Lantern Slides

By ANN GALE

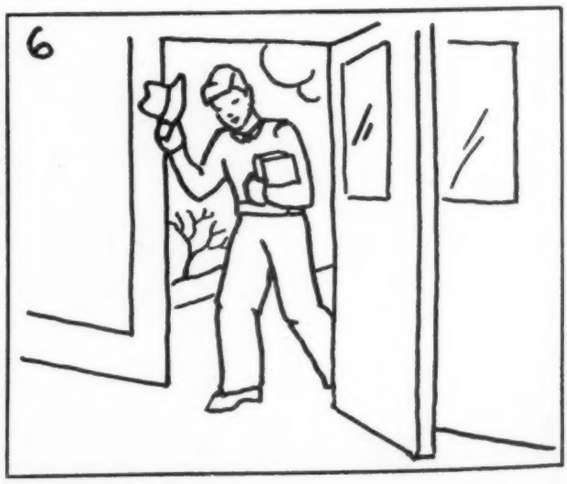
Art Department, Lindblom High School, Chicago

IN these days of over-crowded schools, courtesy is an important attitude to develop. In secondary schools the courtesy lesson could be given during the division period or in English classes. These slides could be traced and used as the basis for a discussion of ordinary courtesy observed in school.

1. Always keep to the right in halls and staircases.
2. Don't push. You may injure someone or something.
3. Yelling is out of place in school.
4. Paper spoils the appearance of your school. Pick it up even though you did not drop it.
5. Always escort visitors to the door of the room they wish to visit. A modern school is large and confusing to a stranger.
6. Remove your hat as you enter the school building.



The simplest type of hand-made slide is made by drawing or tracing on finely finished etched glass with ordinary medium lead pencil. Color, by special crayons or inks, enhances the slides greatly. Fine effects are obtained by blending with crayons. About one - third inch margin should be left all around the slide. The slide is readily cleaned with soap or washing powder to receive a new picture.



POLAND *today*

A new Eastman Classroom Film

on one of Europe's most important key states

Warsaw, the capital—government buildings and characteristic street scenes, shops, transportation, parks, the market place, new housing projects, the sharply contrasting old and new architectural styles. Zinc refining. Agriculture—the great private estates operated under the direction of overseers. A typical individually owned small farm and its peasant proprietor. Peasant home life, customs, mealtime, weaving. Schools—a kindergarten and primary grade, handicraft, wood carving and sculpture. Activities in Gdynia, Poland's great seaport on the Baltic—the loading of lumber and coal, principal Polish exports. 1 reel—$24.

Order now for prompt delivery, or write for further details . . . Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

Eastman Classroom Films

THE FILM ESTIMATES

Being the Combined Judgments of a National Committee on Current Theatrical Films
(A) Discriminating Adults (Y) Youth (C) Children
Date of mailing on weekly service is shown on each film.

Annabel Takes a Tour (Jack Oakie, Lucile Ball) (RKO) Second of feeble "series." Mere formula farce about burlesque publicity-man exploiting temperamental movie star. Wisecrack, slapstick, horseplay, anything-for-a-laugh, largely overacted throughout. Oakie merely Oakie, and heroine is too obviously "acting." 12-20-38
(A) Feeble (Y) Poor (C) No value

Artists and Models Abroad (Benny, J. Bennett) (Para) Rollicking farce about penniless American theatrical troupe in Paris, which rich heroine and father join because Benny mistakes girl for damsel in distress. Incredible adventures but good fun. New feature—Jack gets girl! Lavish fashion show sequence. 12-27-38
(A) **Very good of kind** (Y) (C) **Entertaining**

Breaking the Ice (Breen, Costello, Ruggles) (RKO) Sombre Pennsylvania Mennonite background of stern life lightened by Bobby's singing and efforts to earn money to free his devoted mother from unhappiness. Fine skating sequences, and Ruggles as tricky peddler, Bobby's friend, adds queer ethics, many laughs. 12-13-38
(A) Good of kind (Y) (C) **Mostly very good**

Campus Confessions (Betty Grable, Hank Luisetti) (Para) Ridiculous "college" story with basketball climax. Students busy at play, eats, puppy romancing, razzing rich President who opposes athletics, and his queer son, till both become heroes! Inane, misleading but laughable travesty. Another "first of a series"! 12-13-38
(A) Mediocre (Y) (C) Probably amusing

Christmas Carol (Reginald Owen, Gene Lockhart) (MGM) Fine screening of Dickens that is Dickens, done with dignity and truth in character, action, dialog and settings. Tempo slightly fast at times and one or two Hollywood "effects" are the only flaws in otherwise excellent film. 12-27-38
(A) **Very good** (Y) (C) **Very good**

Comet over Broadway (Kay Francis, Ian Hunter, John Litel) (Warner) Well-acted story of actress heroine's choice between loyalty to falsely imprisoned husband and love for fine devoted playwright who made possible her brilliant career. Mature, dignified "triangle" despite some improbabilities. Recalls "Secrets of an Actress." 12-13-38
(A) Good of kind (Y) Mature (C) No

Crime Takes a Holiday (Jack Holt) (Columbia) Another low-cost crook thriller without undue violence. To get arson gang, district-attorney-hero frames innocent man, wins death sentence, but governor refuses to pardon! Desperately clever radio trick saves victim and catches gang. Legal methods dubious. 1-10-39
(A) Hardly (Y) Perhaps (C) No

Down on the Farm (Jones Family Series) (Fox) Home burns, so family go vacationing to auntie's farm. Farcical doings, puppy love, cheap politics, crazy kidnapping, till Mr. Jones wins cornhusking contest with quite unsportsmanlike outside aid. Corn liquor figures large. Laughable stuff of doubtful taste. 12-20-38
(A) Hardly (Y) Perhaps (C) Doubtful

Dramatic School (Rainer, Goddard, Alan Marshall) (MGM) Stage ambition drives heroine through factory-work by night, dramatic school by day, dreams, romance and disillusion, to final triumph. Some trivial and unconvincing stuff combined with much drama of real power. Notable roles by Rainer and Sondergaard. 1-3-39
(A) **Very good of kind** (Y) Prob. good (C) No

Flirting with Fate (Joe E. Brown, Leo Carrillo) (MGM) Absurd concoction, waste of Brown. Vaudeville trailer-troupe, stranded in Paraguay (!), and burlesque Spaniards in "comedy" of pie-throwing grade. Desperate tries for laughs—mud, ink, two-man bull, jail, firing squad, even risque bits—but few laughs. 12-27-38
(A) Stupid (Y) (C) No value

Gang Bullets (Robert Kent, Anne Nagel) (Monogram) Low cost thriller, quite elementary in acting, but achieving considerable suspense and rather startling climax. Especially villainous gang leader seems to be getting upper hand of district attorney till latter's unique strategy turns the tables. 1-10-39
(A) Hardly (Y) Doubtful value (C) No

Gangster's Boy (Jackie Cooper, Robt. Warwick) (Monogram) Return of wealthy, notorious ex-racketeer father brings problems and unhappiness to fine son, honor student preparing for West Point, who has been ignorant of father's past. Slow-moving, sentimental melodrama, good character values. Jackie convincing. 12-27-38
(A) Fair (Y) Rather good (C) Prob. good

Going Places (Dick Powell, Anita Louise) (Warner) Musical farce about salesman-hero crashing summer resort to get business, mistaken for great jockey, forced to ride wild horse in steeplechase. Much singing of checkered quality and comedy effort with little spark. Amusement values quite spotty. 1-10-39
(A) Stupid (Y) (C) Little value

I Stand Accused (Cummings, Talbot, Helen Mack) (Repub) Two young law grads practicing "go straight and be poor, join racketeers and be rich" idea, until they clash in climactic court proceedings. Usual gang violence, hectic romance, and extra tough villain. Crudely sensational stuff. 12-13-38
(A) Hardly (Y) Little value (C) No

Heart of the North (Dick Foran, Gloria Dickson) (Warner) Gaudy fist-and-bullet melodrama in full color with same old ingredients of fine scenery, heavy villainy, shootings, airplane thrills, drownings, etc. and baby girl in midst of it all. Superheroics by Canadian Mounties chasing river steamboat thieves. 12-20-38
(A) Good of kind (Y) Thriller (C) No

His Exciting Night (Charles Ruggles and minor cast) (Univ) Nonsense farce with some bits too artificial to be very funny. Timid, expert salesman marries very rich young wife. Boss, fearing his resignation, hires dizzy blonde to compromise him. The worm turns and wins. Laughable, but Ruggles deserves better. 12-20-38
(A) Only fair (Y) Probably amusing (C) Hardly

Kentucky (Loretta Young, Richard Greene) (Fox) Expert Technicolor film of great pictorial charm in story about fine horses and fine people. Simple, appealing romance, genuine human values and character interest. Notable role by Brennan as grand old Southern colonel. Authentic, colorful, suspenseful Derby race climax. 1-3-39
(A) (Y) **Excellent** (C) Probably mature

Little Adventuress, The (Edith Fellows, Richard Fiske) (Columbia) Routine racetrack story with the usual run of hard luck for principals. One new angle—little girl turns jockey and rides her horse to victory after regular jockey's double-crossing is discovered. Acting better than the story. 1-3-39
(A) Hardly (Y) Mediocre (C) Unsuitable

Nancy Drew, Detective (Bonita Granville, Frankie Thomas, John Litel) (Warner) Engaging little thriller. Lawyer's keen, irrepressible, 'teen age daughter, bent on being detective, runs down villains with aid of staunch boy friend. Pleasantly puzzling, without undue violence. Another "first" of rather promising "series." 12-20-38
(A) Good of kind (Y) (C) Rather good

Next Time I Marry (Lucille Ball, Jas. Ellison) (RKO) Fast, flippant, laughably absurd farce. Spoiled heiress would marry titled nitwit, but father's will specifies American husband. She "buys" WPA laborer-hero, plans quick divorce. Chase to Reno via trailer ends in wife's "taming" and real love for husband. 1-3-39
(A) Depends on taste (Y) Doubtful (C) No. int.

Orphans of the Street (Tommy Ryan, Robert Livingston) (Republic) Boy-dog story of much appeal but uneven quality. Hero, sent to orphanage, runs away with devoted dog. Murder occurs, dog suspected, formally tried in court, but acquitted with aid of genial old veterinary deftly played by Harry Davenport. 12-20-38
(A) Hardly (Y) Perhaps (C) Fair

Pacific Liner (McLaglen, C. Morris, Wendy Barrie) (RKO) Grim melodrama with some strong character interest, laid below-decks of Shanghai-San Francisco freighter. Doctor and nurse fight cholera, chief engineer fights to keep up steam with dying crew. Grisly cremations of dead add to depressingly entertaining struggle. 1-10-39
(A) **Very good of kind** (Y) Dbtfl. value (C) No

Paris Honeymoon (Bing Crosby, F. Gaal) (Para) Slight, fantastic romantic comedy laid in attractive settings of mythical European country. Bing, millionaire cowboy, is engaged to heiress but marries persistent peasant maid. Deft comedy by Tamiroff. Much use made of liquor which causes funny convulsions. 1-3-39
(A) Thin (Y) Perhaps (C) Little interest

Personal Secretary (William Gargan, Joy Hodges) (Univ) More or less absurd yarn of newspaper man and woman tracking down poison murderer, with much admixture of astrology, thwarted love, and important doings of a dog. Rather good acting by leading players in unfortunately inadequate story. 12-13-38
(A) Mediocre (Y) Fair (C) Hardly

Prairie Moon (Gene Autry, Tommy Ryan) (Republic) Usual western stuff, with Autry singing and elementary acting. Somewhat original in bringing west three very tough-mug city kids who steal picture with their supreme impudence, rough-house antics, gutter English, making fools of all the adults. 12-27-38
(A) Mediocre (Y) Hardly (C) Decidedly not

Rebellious Daughters (Marjorie Reynolds, George Douglas) (Progressive) Cheap, unskillful attempt to capitalize on theme of over-strict parents and independent children. Two girls leave home, fall in with city racketeers, till one is grewsomely murdered and the other safely disillusioned. Mediocre acting. 12-13-38
(A) Crude (Y) No (C) No

Say It in French (Milland, Bradna) (Para) Frothy, sophisticated comedy of complications. Hero and French bride keep marriage secret to help his family out of financial difficulties, she masquerading as maid while he pretends engagement to wealthy girl. Forced situations, some in bad taste. Ridiculous chase at end. 12-27-38
(A) Inane (Y) Unsuitable (C) No

Secrets of a Nurse (E. Lowe, D. Foran, Helen Mack) (Univ) Grim, tedious, incredible melodrama involving nurse, pugilist-hero, successful criminal lawyer and gangsters. Ingredients are crooked fight, three murders, an execution, trial which convicts hero of murder, and last minute confession that saves him. 1-3-39
(A) Mediocre (Y) Unpleasant (C) Certainly not

The Shining Hour (Crawford, Sullavan, Douglas, Young) (MGM) Oldest son brings cabaret dancer wife to ultra-gorgeous "farm" home. Married brother falls in love with her. Tense situation till two wives restore status quo in startling style. Convincing triangle drama, fine in acting, dialog and character interest. 12-20-38
(A) **Very good of kind** (Y) Too mature (C) No

Spring Madness (M. O'Sullivan, L. Ayres) (MGM) Light, amusing, rather enjoyable comedy of college youth. Despite some farcial exaggerations, wholesome serious underlying romantic element. Clever dialog, smartly produced, well acted except for Burgess Meredith's overdone eccentric role. 12-27-38
(A) **Good** (Y) **Good** (C) Doubtful interest

Storm (Bickford, Foster, McLane) (Univ) Pretentious, loosely knit "sea saga" wanders over world till chief characters meet on same ship in terrific storm. Heroine nurse performs second "movie" operation by radio! Heavy drinking, hard fighting, super heroics, clumsy mechanical effects. 12-13-38
(A) Depends on taste (Y) Mere thriller (C) No

Sweethearts (MacDonald, Eddy, and outstanding cast) (MGM) Victor Herbert's music, beautifully sung and played in gorgeous settings. Rest is welter of torrential color, incessant sound, dizzying action. Charming original is hectically "modernized" with jazz tempos, fashion show, and is tiringly long. 1-3-39
(A) Disappointing (Y) Prob. good (C) No int.

Thanks for the Memory (Bob Hope, Shirley Ross) (Para) Merry, sophisticated little farce-comedy of married couples, money troubles, other man, other woman, separation, but coming baby solves all. Free and easy social behaviour with heavy drinking featured. Rather well done by good cast. Hope surprisingly good. 1-10-39
(A) Good of kind (Y) Better not (C) No

Trade Winds (Fredric March, J. Bennett) (U. A.) Unique, clever detective-murder-mystery with philandering hero-detective chasing love, liquor and supposed murderess-heroine around the world. High comedy by Ann Sothern as drunken secretary, and Bellamy as dumb detective. Deftly sexy throughout. 12-27-38
(A) Depends on taste (Y) Unwholesome (C) No

Up the River (P. Foster, A. Treacher) (Fox) Humorous farce showing "pleasant" side of prison, with inmates engaged in football and theatricals. Principals are two "con men," gridiron stars, who escape to save fellow convict's mother from fleecing by crooks and return in time to win game by amusing coup. 1-3-39
(A) Prob. amusing (Y) Doubtful theme (C) No

Young in Heart (Roland Young, Gaynor, Burke, Godard, Dupree, Fairbanks) (UA) Engaging, chronically crooked family of four, firmly averse to work, find sweet, rich old lady an easy mark. But her faith in their "goodness" brings convincing reform. Slow, whimsical character comedy finely done, intelligently amusing. 12-13-38
(A) (Y) **Very good** (C) If it interests

Teach Speech and Music the Modern Effective Way!

MAKE YOUR OWN RECORDS

on New RCA Victor Recorder at Low Cost

Illustrated is RCA Victor Console Recorder MI-12700 ... records and reproduces at speeds of 78 or 33 1/3 r. p. m. using 10″, 12″ or 16″ records, inside out or outside in. Has pick-up tone arm and speaker for immediate play back...high fidelity amplifier and speaker ...especially designed motor assembly insures accurate recording and play back.

Splendid new equipment brings you all 4 essentials of a modern recorder

1. **Records and reproduces with amazing accuracy.**
2. **Sturdily constructed—withstands hard knocks.**
3. **Utmost dependability.**
4. **Extremely simple operation.**

Many teachers and school executives have found that the use of recording equipment provides them with the most accurate and scientific means of determining and correcting speech defects—and measuring pupils' progress in speech and music instruction. A recorder is also invaluable for future play back of recordings of radio talks by prominent speakers, for the study and pronunciation of foreign languages, for the recording of school plays, dramas, debates and other uses.

RCA Victor's newest recorder is illustrated on this page. Look at its outstanding features—and remember—it insures the very finest in quality at extremely low cost. For more complete details write to the address below. No obligation, of course.

• • •

RCA presents the Magic Key every Sunday, 2-3 P.M., E.S.T., on the NBC Blue Network.

Modern schools *stay* modern with RCA radio tubes in their sound equipment.

USE THE COUPON

Educational Department—RCA Manufacturing Co., Inc., Camden, N. J.

Please send detailed information and price quotations on RCA Victor Console Recorder MI-12700.

Name _____

School _____

Address _____

Do you desire a demonstration? (No obligation) _____

RCA Victor

SOUND SERVICE FOR SCHOOLS

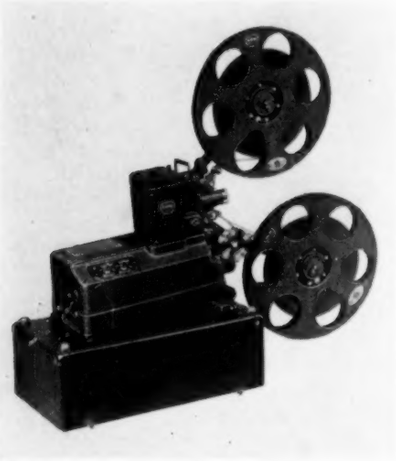
Educational Dept., RCA Manufacturing Co., Inc., Camden, N. J.
A Service of the Radio Corporation of America

AMONG THE PRODUCERS *Where the commercial firms announce new products and developments of interest to the field.*

Ampro Announces Two New Models

The Ampro Corporation, Chicago, Illinois, are announcing two radically new and improved low-priced 16 mm. sound-on-film projectors, Models X and Y, basically new in design, at prices well within the reach of a moderate budget. A new adaptation of Ampro's standard sound mechanism assures sound reproduction of a quality found in higher priced Ampro models. Brilliant picture projection is achieved by the 750-1000 watt illumination.

The machines are compactly constructed, quiet, and easy to operate. All in one case, small and portable, the projector



New Ampro Sound Projector

weighs only 49 lbs., including 1600 ft. reel, carrying case, accessories and cords. All controls are centralized on a single illuminated panel, and reel arm brackets are permanently attached and swiveled into position. Threading is simple—only two sprockets, and further facilitated by film guides.

Every fundamental of Ampro quality is retained in appearance, construction and performance and is backed by the regular standard Ampro guarantee.

Amprosound Model "Y," designed for classrooms and small auditoriums, equipped with Universal AC-DC motor with silent film speed, is priced at $295.00. Amprosound Model "X," designed especially for industry, equipped with 60 cycle AC motor, is priced at $275.00.

If interested, write to the Ampro Corporation, 2839 N. Western Avenue, Chicago, Illinois, and complete specifications will be furnished promptly.

Low Priced Projector Announced By Spencer Lens

The Spencer Lens Company of Buffalo, New York, manufacturers of microscopes and scientific optical instruments, have announced another new projector for 2" x 2" slides, and have promised deliveries beginning January 20. It follows only three months after the announcement of their 750 watt auditorium projector, Model GK.

The new instrument will be known as Model MK Delineascope, and the basic unit will be priced at $22.50. The manufacturers claim that this 100-watt projector is far more efficient than would be expected from its size and price,—that it remains cool enough to handle at all times, and assures safety for color films.

A feature that will influence many purchasers is accessory equipment that will soon be available. The front of this instrument is so designed that it may be removed by loosening a knurled thumb screw, and the accessory equipment to handle strip film in double frame or single frame, added. Increased illumination will be available for use in classrooms.

The Spencer projection lens is 5" focal length, and has a speed of F:3.6. Operation is simple. Slides are placed in a conventional type lantern slide carrier, all metal and carefully fitted. The instrument has a self-leveling elevating device held by a knurled thumb screw. The lamp house is hinged, permitting easy access to lamps and condensers.

RCA School Catalog

The third edition of "RCA Victor Sound Service For Schools," a catalog devoted to the application of radio, recorded music, sound movie projectors, transmitters, sound reinforcing equipment, and electronic instruments for schools of any size, has been announced by the Educational Department of the RCA Manufacturing Company.

The catalog is available to interested teachers and school executives through RCA Victor distributors or directly from the Company. Like the earlier editions, the 32-page book is printed in two colors, is lavishly illustrated and includes extensive notes and comments to explain the application of each type of equipment to school purposes.

Radio and sound equipment never before included in the catalog is listed, including two centrally controlled school sound systems and two recording and instantaneous play-back instruments. Also described are ultra short-wave radio transmitting and receiving equipment, radio parts and test equipment for laboratory use, a new portable sound reinforcement system, and nearly a score of new radios and Victrolas particularly suited for school use. Information about four battery-operated instruments for rural schools is also included.

"This new catalog is the most complete of its kind," said Ellsworth C. Dent, Director of the Educational Department. "It shows how much has been done by RCA Victor to develop and make available practically all types of radio and sound equipment which may be used effecively in schools and other educational institutions. "We have included ultra short-wave transmitting and receiving equipment to meet requests among educators for information which will help them to utilize the new radio broadcast channels allotted for educational use."

The back cover of the catalog is devoted to an outline of radio broadcasts of interest to schools.

DeVry Centralized System

The new De Vry Centralized Control System shown in the illustration has been built to meet a demand for a low-cost, light weight Centralized Control

unit. This outfit provides two-way communication between a number of rooms.

Universal 16mm Sound Projectors Licensed by ERPI

Along with news of their new models, comes an announcement from Universal Sound Projector that arrangements are being made by which they will manufacture under the following licenses:

"Manufactured under licenses from Electrical Research Products, Inc., under United States patents of American Telephone and Telegraph Company and Western Electric Company, Incorporated, for use only in connection with the exhibition of motion pictures."

The improvements incorporated in the new projectors allow Universal to be one of the few granted permission to operate under this license.

Bell & Howell Film Book

The Filmosound Film Library Book just issued by Bell & Howell Company lists in its sixty-four 8½x11 inch pages over 2800 reels of sound-on-film features, comedies, cartoons, adventure, nature subjects, music, religion, history, news reels, sports and teacher training, offered for rental or sale by the Bell & Howell Filmosound Library. There is also much interesting information on the method of booking and servicing film prints, on the varied application of listed films to subject-matter fields, and criteria for the appraisal of all offerings. The book is profusely illustrated with scenes from listed films. A separate 8-page alphabetical index, treated as an insert, facilitates finding films known by title and gives outright sale prices. Both Filmosound Library Book and index are "binder-punched" for the later inclusion of anticipated additions and for filing.

A majority of film listings in the Filmosound Library Book — over 2000 reels—are for entertainment, but selected, too, with a view to distinct cultural value. A foreword describes the method of using feature films in school auditoriums for educational purposes, tied in directly with classroom preparatory and review activities. Similar suggestions are included with the headings of other major groups of films, such as serials, travel, nature, current events, foreign language teaching, vocations, etc.

A copy of the book is sent free to every owner of a 16mm. sound projector registered in the Bell & Howell files. Additional copies and copies to non-owners of sound equipment are priced at 25c each. Further information may be had by addressing Bell & Howell Company, 1801 Larchmont Avenue, Chicago, Illinois.

New 100 Watt Leitz Projector

Designed for showing pictures in the classroom, in the home or to any small group of people, the new Leitz VIII-C 100 watt stillfilm projector presents many novel features. Scarcely larger than a book, measuring only 6¼ x 6¼ x 3 inches, not including lens, it is made of plastic and metal, plastic around the front of the projector where heat should not be transmitted and metal around the lamp house where heat should be transmitted. The projector may be used for projecting either 2 x 2 inch glass slides or 35mm film strips. The slide changing gate is interchangeable with the film carrier and the front of the projector may be rotated so that both horizontal and vertical pictures may be projected from film strips. A three lens condenser system and a silvered reflector behind the projection lamp are said to make the illuminating system unusually efficient for a 100-watt projector. The condenser system is easily removable so that either 50 mm Leica Camera lenses or a special 85mm projection lens may be used. A heat absorption filter between the lamp and condenser system aids in dissipating the heat, while the black top of the bulb permits the tops of the inner and outer lamp housings to be open for maximum ventilation.

Prices and more information may be had by writing to E. Leitz, Inc., 730 Fifth Avenue, New York, N. Y.

In Continuous Service as the Dennis Lyceum Bureau and the Dennis Film Bureau Since 1910
FB
If You Have 16mm Sound Equipment, You Will Be Interested in Our Library of Select Pictures.
Trademark Of
Dependability in 16mm
Motion Picture Service
ADDRESS FOR YOUR FREE CATALOGUE
Leroy Dennis Film Bureau, Wabash, Ind.

Current Film Releases

(*Concluded from page* 24)

immersed in liquid air and the effect shown. The qualities of liquid oxygen are also illustrated.

Film Review

Coast Guard Communications, a 16 mm., three reel sound film in monotone, with a running time of 33 minutes, was produced by the Bray Studios in 1937 cooperating with the units of the Coast Guard Service.

This film holds the interest of pupils from Grade 8 through 12 from start to finish. It portrays the means developed by the Coast Guard to maintain its lines of communication. The use of flares and beacons, semaphores and other manual means of communication are indicated but the major part of the film illustrates the great efficiency of radio and radiotelephone in the routine work of this branch of the Government Service. Concomitantly, the pupil gets a clear picture of the place of the Coast Guard and its work.

Shots of ships at sea, the radio room "Sparks" at work, the transmitting and receiving stations of the Coast Guard are all clear and filled with action. The narrator "Fades out" frequently to enable the story to be told by those participating in the film itself. One sees action on the bridge, hears the clang of engine room signals, hears the snapped commands and scuffle of men leaping into action.

The film is an excellent medium for bringing out this colorful but unsung branch of the Federal Government. It should prove helpful to classes in civics and the like. It is also of value to students of general science who see a clear-cut picture of adaptation of electricity to communication.

By L. HALL BARTLETT
Head, Social Studies Department
Garden City High School
Garden City, New York

Additions to "School List" Films

Word from Films, Incorporated, states that *The Plainsman* has been added to its "School List" of Photoplays now available in 16 mm size. *Maid of Salem* will be available after February 1st and *Clarence* after March 15th. Complete information on this organization's distribution plan to schools can be had by writing to headquarters, 330 West 42nd Street, New York City.

New Film on Coffee

The story of coffee culture is depicted in the new two-reel educational talking picture, *Coffee—from Brazil to You,* produced by William Burton Larsen for the Pan American Union, Washington, D. C. Coffee-growing procedures as practiced on the big plantations of Brazil are illustrated—the "burning over" of newly cut area selected for a new plantation, planting the coffee beans from which coffee plants are grown—followed by scenes of process work and the loading of coffee into ships at Santos. The story finishes in the roasting plants in Brooklyn with the packaging of the coffee. The film is loaned free to responsible educational institutions except for express charges. Prints are available in 16mm and 35mm sound. It is suggested to those who wish to book the picture to kindly send two or three alternative dates.

Puppets Depict History of Oil

A unique Technicolor puppet film, featuring a new type of flexible rubber figurine, created and animated by Louis Bunin, noted puppeteer, will be shown by the Petroleum Industry Exhibition at the New York World's Fair, 1939. These puppet characters make possible a medium for film fantasy possessing all the appeal of the animated cartoon. The illusion of animation is secured by moving the puppets fractionally from one position to the next. The film will tell the story of the discovery and development of oil in America, and its place in the world of today. The little rubber puppets will move against a shifting panorama, beginning with a puppet horse pulling a covered wagon across the desert, and winding up against the impressionistic background of a super-modern city.

HERE THEY ARE

A Trade Directory for the Visual Field

FILMS

Akin and Bagshaw, Inc. (6)
1425 Williams St., Denver, Colo.

Audio-Film Libraries (5)
661 Bloomfield Ave., Bloomfield, N. J.
(See advertisement on page 27)

Beacon Films (6)
43 E. Ohio St., Chicago
(See advertisement on page 24)

Bell & Howell Co. (6)
1815 Larchmont Ave., Chicago
(See advertisement on inside back cover)

Bray Pictures Corporation (3, 6)
729 Seventh Ave., New York City

Cine Classic Library (5)
1041 Jefferson Ave., Brooklyn, N. Y.
(See advertisement on page 28)

Dudley Visual Education Service (4)
736 S. Wabash Ave., Chicago
4th Fl., Coughlan Bldg.
Mankato, Minn.

Eastin 16 mm. Pictures (6)
707 Putnam Bldg., Davenport, Ia.
Burns Bldg., Colorado Springs, Colo.

Eastman Kodak Co. (1, 4)
Rochester, N. Y.
(See advertisement on outside back cover)

Eastman Kodak Co. (4)
Teaching Films Division,
Rochester, N. Y.
(See advertisement on page 31)

Eastman Kodak Stores, Inc. (6)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

Edited Pictures System, Inc. (6)
330 W. 42nd St., New York City

Erpi Classroom Films, Inc. (2, 5)
35-11 35th Ave., Long Island City, N. Y.

Films, Inc. (6)
330 W. 42nd St., New York City
64 E. Lake St., Chicago
925 N. W. 19th St., Portland, Ore.

Fisher Body Division (2, 5)
General Motors Corp., Detroit, Mich.
(See advertisement on page 25)

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Walter O. Gutlohn, Inc. (6)
35 W. 45th St., New York City
(See advertisement on page 1)

Harvard Film Service (3, 6)
Biological Laboratories,
Harvard University, Cambridge, Mass.

Guy D. Haselton, Travelettes (1, 4, 5)
7936 Santa Monica, Blvd.,
Hollywood, Calif.

Howard Hill Motion Picture Service (5)
280 Scenic-Piedmont, Oakland, Cal.
Chamber of Commerce Bldg.,
Los Angeles, Cal.

J. H. Hoffberg Co., Inc. (2, 5)
729 Seventh Ave., New York City

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 1)

Leroy Dennis Film Bureau (6)
Wabash, Ind.
(See advertisement on page 35)

Lewis Film Service (6)
105 E. 1st St., Wichita, Kan.
(See advertisement on page 22)

The Manse Library (4, 5)
2439 Auburn Ave., Cincinnati, O.
(See advertisement on page 28)

Post Pictures Corp. (6)
723 Seventh Ave., New York City
(See advertisement on page 23)

UFA Educational Films (3, 6)
729 Seventh Ave., New York City
(See advertisement on page 29)

United Projector and Films Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Universal Pictures Co., Inc. (2)
Rockefeller Center, New York City
(See advertisement on page 27)

Visual Education Service (6)
131 Clarendon St., Boston, Mass.

Wholesome Films Service, Inc. (3, 4)
48 Melrose St., Boston, Mass.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

Y.M.C.A. Motion Picture Bureau (1, 6)
347 Madison Ave., New York City
19 S. LaSalle St., Chicago
351 Turk St., San Francisco, Cal.

MOTION PICTURE MACHINES and SUPPLIES

The Ampro Corporation (6)
2839 N. Western Ave., Chicago
(See advertisement on page 5)

Bell & Howell Co. (6)
1815 Larchmont Ave., Chicago
(See advertisement on inside back cover)

Central Camera Co. (6)
230 S. Wabash Ave., Chicago
(See advertisement on page 28)

DeVry Corporation (3, 6)
1111 Armitage St., Chicago
(See advertisement on inside front cover)

Eastman Kodak Co. (6)
Rochester, N. Y.
(See advertisement on outside back cover)

Eastman Kodak Stores, Inc. (6)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Howard Hill Motion Picture Service (5)
280 Scenic-Piedmont, Oakland, Cal.
Chamber of Commerce Bldg.,
Los Angeles, Cal.

Holmes Projector Co. (3, 6)
1813 Orchard St., Chicago
(See advertisement on page 29)

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago
(See advertisement on page 1)

RCA Manufacturing Co., Inc. (5)
Camden, N. J.
(See advertisement on page 33)

S. O. S. Corporation (3, 6)
636 Eleventh Ave., New York City

Sunny Schick National Brokers (3, 6)
407 W. Wash. Blvd., Ft. Wayne, Ind.

United Projector and Films Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Universal Sound Projector (5)
1921 Oxford St., Philadelphia, Pa.
(See advertisement on page 26)

Victor Animatograph Corp. (6)
Davenport, Iowa
(See advertisement on page 23)

Visual Education Service (6)
131 Clarendon St., Boston, Mass.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

PICTURES and PRINTS

Colonial Art Co.
1336 N.W. 1st St., Oklahoma City, Okla.

SCREENS

Da Lite Screen Co.
2717 N. Crawford Ave., Chicago
(See advertisement on page 25)

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

SLIDES and FILM SLIDES

Eastman Educational Slides
Johnson Co. Bank Bldg.,
Iowa City, Ia.

Edited Pictures System, Inc.
330 W. 42nd St., New York City

Ideal Pictures Corp.
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 1)

Keystone View Co.
Meadville, Pa.
(See advertisement on page 6)

Radio-Mat Slide Co., Inc.
1819 Broadway, New York City
(See advertisement on page 28)

Society for Visual Education
327 S. LaSalle St., Chicago, Ill.
(See advertisement on page 22)

Visual Education Service
131 Clarendon St., Boston, Mass.

Visual Sciences
Suffern, New York
(See advertisement on page 28)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

STEREOGRAPHS and STEREOSCOPES

Keystone View Co.
Meadville, Pa.
(See advertisement on page 6)

STEREOPTICONS and OPAQUE PROJECTORS

Bausch and Lomb Optical Co.
Rochester, N. Y.
(See advertisement on page 2)

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

General Films Ltd.
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Keystone View Co.
Meadville, Pa.
(See advertisement on page 6)

Spencer Lens Co.
19 Doat St., Buffalo, N. Y.
(See advertisement on page 21)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

REFERENCE NUMBERS

(1) indicates firm supplies 35 mm. silent.
(2) indicates firm supplies 35 mm. sound.
(3) indicates firm supplies 35 mm. sound and silent.
(4) indicates firm supplies 16 mm. silent.
(5) indicates firm supplies 16 mm. sound-on-film.
(6) indicates firm supplies 16 mm. sound and silent.

Continuous insertions under one heading, $1.50 per issue; additional listings under other headings, 75c each.